AN ASSESSMENT OF CUSTOMER SATISFACTION BETWEEN A FAMILY PRACTICE AND OUTPATIENT CLINIC 95th COMBAT SUPPORT HOSPITAL HEIDELBERG, GERMANY

GRADUATE MANAGEMENT PROJECT

SUBMITTED TO THE FACULTY OF

BAYLOR UNIVERSITY

IN PARTIAL FULFILLMENT OF THE
REQUIREMENT FOR THE DEGREE
OF

MASTER OF HEALTH ADMINISTRATION

BY

CAPTAIN JOHN P. COOK, MS

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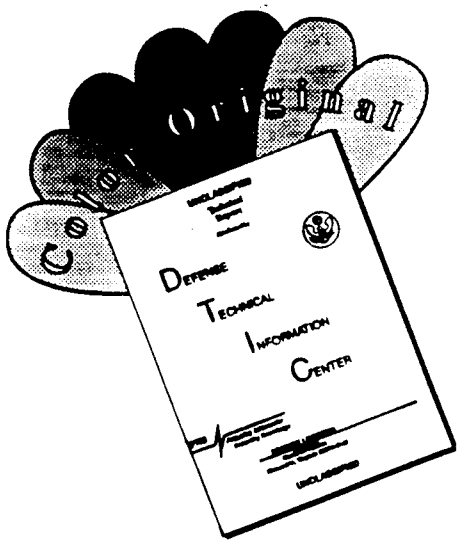

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The drawdown in U.S. Army Europe has brought with it a need to measure and assess consumer satisfaction in the area of health care. This information will allow medical units to better respond to patient needs during this stressful transition period. The management problem in this study was to measure the perceived quality of care in the Ambulatory Care Department of the 95th Combat Support Hospital (CSH). This was done by quantifying any differences in levels of satisfaction between patients seen in the Family Practice and Outpatient Clinics. The resulting information allowed suggested improvements in the health care system. This study used a quantitative research approach to collect and analyze data using a patient satisfaction survey. Once the data was collected, descriptive and inferential statistics were computed to determine the major predictors of patient satisfaction. Results of the study show that patients seen in the Family Practice Clinic enjoy higher levels of satisfaction in all established dimensions of health care. A committee was commissioned to review the results of the study and offer viable recommendations for improving identified problems. Specific recommendations were made in the areas of physical space, training, and the sickcall process.

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GRADUATE MANAGEMENT PROJECT

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ABSTRACT

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This study used a quantitative research approach to collect and analyze data using a patient satisfaction survey. Once the data were collected, descriptive and inferential statistics were computed to determine the major predictors of patient satisfaction.

Results of the study show that patients seen in the Family Practice Clinic enjoy higher levels of satisfaction in all established dimensions of health care. A committee was commissioned to review the results of the study and offer viable recommendations for improving identified problems. Specific recommendations were made in the areas of physical space, training, and the sick call process.

INTRODUCTION

U.S. Army Europe is in the midst of the largest drawdown of forces ever. The medical component of this drawdown has caused a strain on some of the medical organizations that remain. To ensure patient confidence in the quality of health care throughout this process, medical organizations must continually measure and assess consumer satisfaction. Analysis of this information will allow medical units to be proactive in modifying structures, processes, and outcomes in patient care.

One of the best tools to measure patient perceptions of health care, and perhaps quality itself, is the patient satisfaction survey. Caution must be observed by the investigator to ensure the proper areas of interest are covered in the patient satisfaction instrument. Literature is replete with specified subject areas, or dimensions, that are included in a valid and reliable instrument. One of the most well-established patient satisfaction surveys was developed in 1988 by Allyson Ross Davies and John E. Ware. This instrument includes seven dimensions which accurately measure levels of patient satisfaction.

This study used the Davies and Ware instrument to look at the quality of, and possible differences in, satisfaction levels between patients seen in the Family Practice Clinic and the Outpatient Clinic of the 95th CSH. Established quantitative methodologies were followed throughout the study to insure

reliable and valid results. Findings and recommendations were reported to the appropriate authorities in the health care system.

Conditions That Prompted the Study

The Chief of the Ambulatory Patient Care Department (APC), LTC Doyne, proposed a study be done to assess the consumers' satisfaction levels of the Family Practice and Outpatient Clinic patients at the 95th CSH. After assessing the patient satisfaction levels, the two clinics could be compared and potential patient dissatisfers identified.

Total quality management (TQM) has been described as "a management system for continuously improving performance at every level of every business function by focusing on maximization of customer satisfaction" (Fifer 1990). In an effort to support the TQM philosophy of the organization, the focus of what does and does not satisfy patients in both the Outpatient and Family Practice groups are of great Heidelberg Medical Department Activity (HMEDDAC) command interest. By quantifying any differences in levels of patient satisfaction between these groups, I may be able to validate the level of perceived quality in the clinics and address any shortcomings.

The best way of measuring patients' perceptions of health care quality is to properly conduct an objective and quantitative survey (Press 1991). It is important to continually assess the consumers' requirements. Only then can the organization hope to

meet their demands and thereby provide quality health care (Deming 1986).

LTC Doyne (with approval of the hospital commander, COL Wilson, and the Deputy Commander for Administration [DCA], LTC Heckert), proposed a study be done to measure possible differences in the levels of patient satisfaction between the two groups. The study required a capability of quantifying differences in levels of patient satisfaction between the patients seen in the Family Practice Clinic and those seen in the Outpatient Clinic. To do this, several subject areas, or dimensions of questions, were asked by the investigator to adequately assess patients' levels of satisfaction.

Statement of the Problem

A comprehensive analysis of patient satisfaction was required to measure the perceived quality of care and quantify any differences in satisfaction levels between patients seen in the Family Practice Clinic and patients seen in the Outpatient Clinic of the 95th CSH. This analysis was necessary to determine what improvements might be made to lessen any gaps between levels of patient satisfaction with medical care and conveyance between these two groups.

Literature Review

The literature suggests that certain dimensions be included when creating a valid and reliable instrument to measure patient satisfaction and quality. For the purpose of this study, the major patient satisfaction dimensions of technical quality, interpersonal care, communication, access to care, and continuity of care were explored.

Much emphasis is placed on the study of patient satisfaction as a determinant of quality in health care. Aredis Donabedian mentions it as the "ultimate validation of the quality of care" (McMillan 1987). Customer satisfaction is a valid measure of quality and should cover the areas of patient-doctor interaction, access to care issues, and the courtesy of staff members (Shouldice 1988). The Joint Commission for the Accreditation of Healthcare Organizations (JCAHO) identified subject areas, or dimensions, in which health care organizations should build standards of quality. Those areas are access to care, timeliness, management structure, continuity of care, technical quality, and patient satisfaction (Flanagan 1987). Other experts have defined technical quality, accessibility, physical environment, art of care, availability, and continuity as the most important dimensions to be addressed when seeking valid patient feedback about satisfaction (Ware 1978). Ware also points out that the health care customer is the best source of information on data relating to technical quality and

interpersonal care when compared to depending on source documents (claims and medical records) for this information (Davies 1988).

Technical Quality

It is often asserted that the patient is not properly qualified to judge the technical competency of healthcare providers. Some studies ,however, suggest that patients can accurately predict competent physicians from substandard physicians based on established professional criteria set for competent provider performance. Other studies have shown conflicting evidence for a patient's capacity to rate the provider's abilities. Evidence points to the idea that patients rate satisfaction with technical quality based on their perceptions of medical competence, intelligence, and the provider's qualifications (Reeder 1985).

Some research suggests that satisfaction with a provider's technical skills is more often related to the patient's perception of the provider's ability to communicate and their interpersonal talents (Bartlett 1984). However, others see technical quality as a distinct and viable dimension of patient satisfaction. Davies and Ware (1988) point out in a study of consumers in quality of care assessment, that the bias introduced by the patient's "personal characteristics" is not of sufficient magnitude to "invalidate consumers' ratings of the interpersonal or technical quality of their care".

Interpersonal Care

Interpersonal care aspects of the health care encounter are instrumental in eliciting patient satisfaction and stand out as standards of quality in medical care. Studies have shown that the better a provider is at creating a positive two-way communication environment with the patient (where patient preferences are taken into account), the better the patient will be at following through with physician recommendations (Lochman 1983). Some studies indicate interpersonal aspects of the medical encounter can be a more influential determinant of patient satisfaction than the actual outcome of the care provided. In one study, 92 percent of those patients surveyed expressed satisfaction with a bad outcome because they felt "the physician had done his or her best". This may be accounted for by the good interpersonal skills of the provider (Wooley 1978).

Along the same lines, studies have shown that monitoring patient satisfaction of patient-provider communication may help in identifying possible problems with staff member communication skills and training (Wooley 1978).

Access To Care

Access to care as a dimension is an important determinant when seeking patients' perceptions of satisfaction with the health care organization or clinic. Access can be defined as a degree of best fit between the hospital or clinic and the patient (Penchansky 1981). The more relevant areas of access to be

addressed by a survey instrument are availability (the supply of providers, travel distance, and specialized programs), accommodations (how the organization is set up to accept the client), accessibility (relationship between client and facility), and acceptability (how clients and providers feel about the facility and personnel involved in the health care encounter based on things like religious belief, sex, and personal characteristics) (Thomas 1984).

Studies have shown that access is one of the most important determinants of patient satisfaction (Gary 1981). One study suggested that in family practice clinics access is perceived by patients as a feeling "that the family physician represents a responsive ally within the larger context of the health care bureaucracy" (Hilton 1984).

Continuity Of Care

Continuity of care issues include the capacity and plan of the health care organization to assure timely care is provided to its consumer. It also includes issues of having appropriate discharge planning mechanisms in place and maximizing coordinated care. Studies have shown that one of the primary reasons for high levels of satisfaction with family practice clinics is the physician continuity enjoyed by these patients (Schroeder 1977).

Dimensions of Present Study

Literature suggests that these major dimensions be included in any patient satisfaction instrument. Thus, for this study the researcher sought an instrument that included these dimensions for the purpose of comparing levels of satisfaction between patients seen in the Family Practice and Outpatient Clinics.

In a study by Hilton, Butler, and Nice in 1984, patient satisfaction levels were compared between Family Practice and Outpatient Clinics in a Naval hospital. Like the present study, Hilton employed a five-point Likert-type scale using the dimensions suggested by Ware and Snyder. These dimensions included access to care, quality of care, technical quality, communication, and interpersonal characteristics of providers. As is an alternate hypothesis in this study, Hilton found that patients in the Family Practice Clinic were more satisfied in all dimensions than those in the Outpatient Clinic. The dimensions that recorded the widest gap between the two groups were access to the provider and the interpersonal skills of the provider (Hilton 1984).

Purpose of the Study

The purpose of the study was to determine if differences in satisfaction levels exist between patients seen in the Family Practice Clinic and patients seen in the Outpatient Clinic at the 95th CSH. The hypotheses tested were as follows:

Hypothesis 1.

Ho: Patients seen in the Family Practice Clinic will not enjoy a higher level of satisfaction in all dimensions than patients seen in the Outpatient Clinic.

Ha: Patients seen in the Family Practice Clinic will enjoy a higher level of satisfaction in all dimensions than patients seen in the Outpatient Clinic.

Hypothesis 2.

Ho: Patients seen in the Outpatient Clinic will not have a lower level of satisfaction in all dimensions than patients seen in the Family Practice Clinic.

Ha: Patients seen in the Outpatient Clinic will have a lower level of satisfaction in all dimensions than patients seen in the Family Practice Clinic.

METHODS AND PROCEDURES

Beneficiary Population

The 95th CSH is in support of 11,470 local beneficiaries in the Heidelberg area. Of these, 3,586 are active duty and 6,384 are family members. Also, 920 members of the Land Armed Forces Central Europe (LANDCENT) and their family members, and approximately 580 U.S. military retirees and their families are seen on a space available basis (Current Forces Europe, 7th MEDCOM). LANDCENT personnel are allied forces stationed in the Heidelberg area working at the U.S. Army headquarters. The breakdown of the population can be seen in Figure 1.

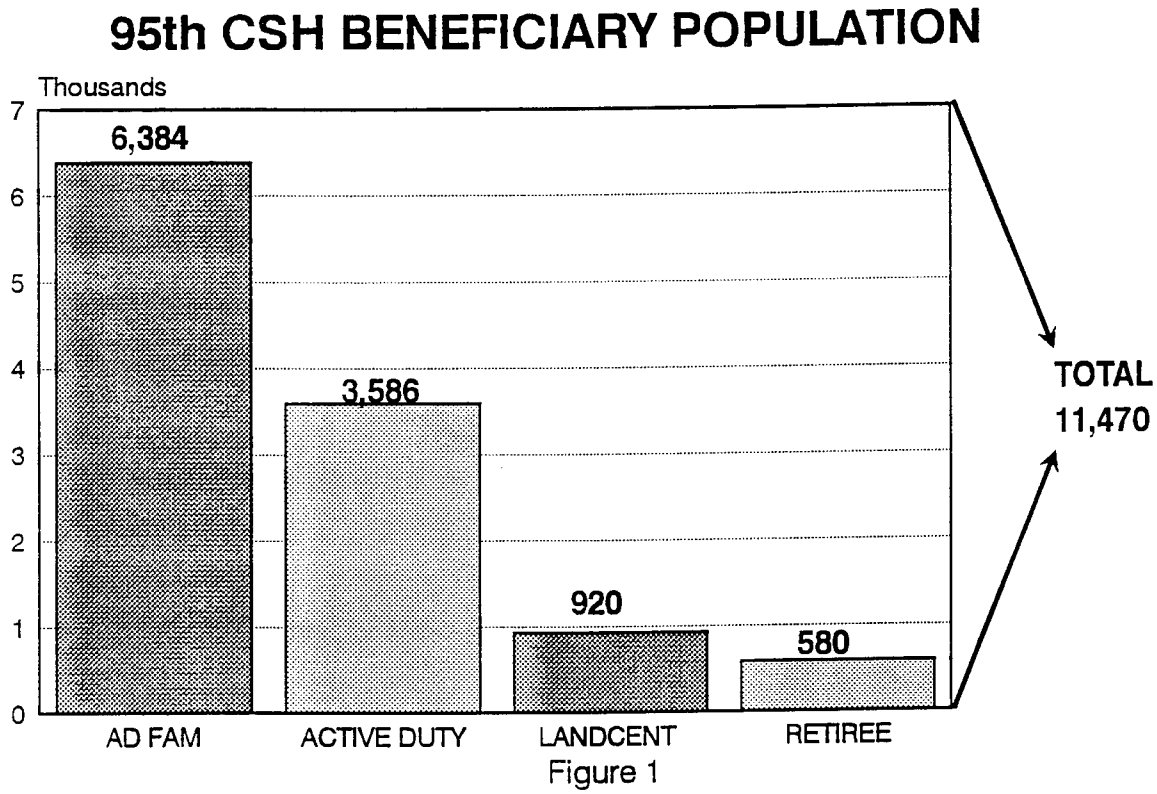

Figure 1

Clinic Setting

The Family Practice and Outpatient Clinics of the 95th CSH are co-located on the first floor of the hospital. Both clinics are under the direction of LTC Doyne as the chief of APC. Each clinic sees approximately 1,200 patients per month. The Family Practice Clinic has four full-time physicians and one part-time physician assigned. The four full-time physicians are active duty Army; the part-time physician is a Department of the Army civilian. The Outpatient Clinic has two physicians assigned, both of whom are active duty. When one of the outpatient physicians is not able to work, his workload is covered by a physician assigned from the Emergency Room. Patients who are empaneled in Family Practice are seen for routine sick call by appointment. Patients are seen in the Outpatient Clinic on a first come, first served (or open sign-in) basis for routine sick call, except E-7s and above who can make appointments. The approximate waiting time for empanelment into the Family Practice program is one year from sign-up and is open to all active duty military members and their families.

The Family Practice Clinic enjoys large enclosed waiting rooms adjacent to the treatment rooms and doctor offices (Appendix 6). These rooms have comfortable furniture and updated reading material for the patients. In contrast, the Outpatient Clinic must have their patients sit in chairs that line the hallway while they wait for their name to be called. These

chairs are a hard plastic type and there are no reading materials available for the patients.

There is an underlying assumption that family members who are seen in the Family Practice Clinic are more satisfied with all aspects of their health care than are those seen in the Outpatient Clinic (Nice 1983). Literature supports the notion that continuity of care with one provider accounts for much of this difference. Studies have shown that there is a positive relationship between seeing the same provider and high levels of patient satisfaction (Breslau 1981). These assumptions are based on the premise that families empaneled in Family Practice enjoy consistency in their medical care because they see the same provider.

The assigned physician remains the family's physician throughout its stay in the Heidelberg community unless the provider rotates out of country or is sent for temporary duty. In the Outpatient Clinic, the patient may see a different physician as the primary provider each time he visits the hospital. Part of the difference in satisfaction may also be explained by the assertion that physicians involved in family practice clinics place a greater emphasis on the modification of professional behavior to ensure enhanced patient satisfaction (Hilton 1984).

Conceptual Model

It is important that accepted research methodologies and procedures be followed to ensure credibility of the data and information collected. Thus, this research project was carried out following a theoretical model, and through quantitative methods using an established, self-administered patient satisfaction survey as the primary instrument. The process of the study followed the conceptual framework presented in the theoretical model of Figure 2.

The model shows the hypothesis that patients will vary in their levels of satisfaction as a function of demographics and the clinic where they were seen. Significant differences in satisfaction levels between these two groups will allow for suggested recommendations to modify the process of delivering health care in these clinics. Data on the variables of age and sex were collected to access the comparability of the two groups on these variables.

THEORETICAL MODEL OF PATIENT SATISFACTION BETWEEN FAMILY PRACTICE AND OUTPATIENT CLINICS

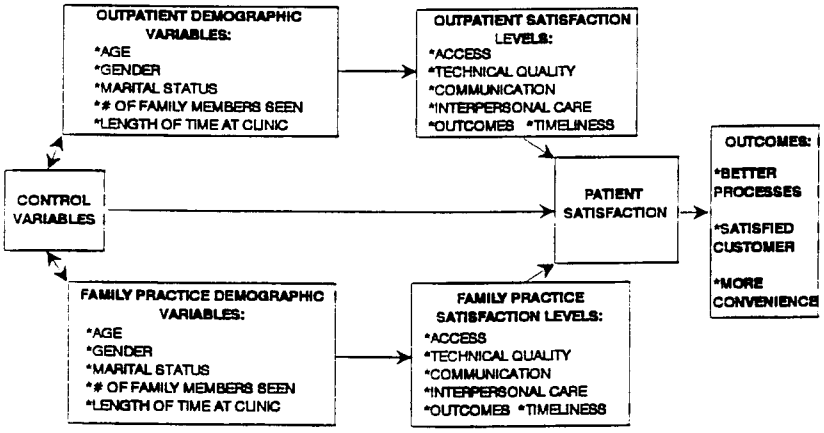

Figure 2

Variables

The independent variables were the clinic, age, and gender. The dependent variables were the subject areas (or dimensions) used in the survey instrument and are noted below:

1. Access to Care (11 questions).
2. Technical Quality (4 questions).
3. Communication (3 questions).
4. Choice and Continuity (2 questions).
5. Interpersonal Care (6 questions).
6. Outcomes (2 questions).
7. Timeliness (3 questions).
8. Demographic Information (5 questions).

Mention must be made of two particularly important demographic variables, age and gender. Literature shows that a very significant amount of variance in patient satisfaction is accounted for by age, and gender. In six studies examined by Gregory Pasco, he found this level of significance to range from 0.0 to 0.035 for age and 0.006 to 0.023 for sex (Pasco 1983). The following model is used to help examine the effect age and gender may have on the dependent variables:

$$y = B_o + B_1X_1 + B_2X_2 + B_3X_3$$

y = Dependent Variable

B_o = Intercept Term

B_x = Partial Slope

X_1 = Clinic

X_2 = Age

X_3 = Gender

Instrumentation

The instrument selected for the study was constructed using seven primary features or dimensions (Access to Care, Technical Quality, Communication, Choice and Continuity, Interpersonal Care, Outcomes, Timeliness, and Various Demographic Information). These were taken from the 1988 Group Health Association of America, Inc., (GHAA) Consumer Satisfaction Survey and User's Manual developed by Allyson Ross Davies and John E. Ware. The eight major dimensions were selected for their capacity to determine or predict patient satisfaction. The demographic variables were selected for their capacity to control and account for bias effects on the dependent variables.

These dimensions break down to 36 scaled questions that relate directly to the focus of this study. Each question is rated for its level of satisfaction on a bipolar scale, with one (1) being the lowest and five (5) being the highest. The format for these scales was derived from the Likert (1932) scale that allows a continuum from a negative to a positive response. These evaluation rating scales have been proven to elicit consistent

and valid results (having a more normal distribution) than general (or global) scales (Pascoe 1983).

Dimensions concerning financial arrangements and health insurance were left out of the instrument because the patients in the study do not conduct financial transactions with the military treatment facility (MTF) for their health care and are authorized beneficiaries. Additionally, three global questions relating to overall medical care were excluded. They were not relevant to the required information needed at the clinic level. Support for the exclusion of these three questions is found in a report by the Blue Cross and Blue Shield Association (Cleary 1988). Blue Cross found that global measures of satisfaction too often do not allow a proper focus on issues related to the "quality of care".

The Davies and Ware instrument is a product of over 17 years of testing and development, and is recognized as the best documented patient satisfaction instrument available. The internal consistency reliability coefficients (Cronbach's Alpha) have been reported to range between 0.87 and 0.96 for all of the scales contained in this instrument (O'Connor 1991).

Considerations for the layout of the instrument consisted of an attractive and informative cover, easy-to-understand dimensions separated by plenty of space, and a format allowing easy and quick completion by the consumer. Copies of the instruments are included in Appendices 1 and 2.

Pilot Study

A pilot survey using this instrument was then undertaken. The survey was produced and administered to fifty (50) patients in each clinic to check the validation, reliability, and construct of the instrument. Once the data were collected, an analysis was done and reliability coefficients were run using the Cronbach's Alpha test (Cronbach's 1951). The reliability of the instrument was calculated to check the internal consistency of each scale. Validity of the instrument was also calculated and relates to the capability of the instrument to accurately measure what it was constructed to measure. The Alpha levels for each dimension exceeded the baseline .80 level.

Modifications to the instrument were required as a result of the pilot study. Problems existed in the areas of formatting and spelling. These corrections were made prior to mass producing the primary instrument.

Survey Administration

The instrument in the primary survey was administered in both clinics during the same time period each day between the hours of 0800 and 1200. Based on patient flow, an estimated 2-5 day period was needed to collect the required surveys. Anyone under the age of 18 was excluded as were any first time visitors to the clinics. These limitations helped ensure an adequate familiarity and sophistication among the respondents (Hilton 1984).

The instrument was given out in the clinics by the principal investigator. The instructions were read from a prepared script and any questions patients had about the survey were answered. The investigator then left the patient area and later collected the surveys as patients left the clinic area. The standard protocol was read in groups or individually as patients checked into the clinic. At this time, consent to participate was received from the patient. I used this technique in hopes of enhancing acceptable response rates and easing the process of survey completion. Reports show that personal contact in distributing the survey prior to the customer leaving the facility enhances the response rate. In some cases this method allowed response rates as high as 91 percent (Rubin 1990).

Literature suggests that patient satisfaction surveys be administered as close to the health care encounter as possible. With a lapse of time between the encounter and survey comes more general reactions to medical care than the environment under investigation (McMillan 1987).

As an ethical safeguard, patients were told the survey was being used to collect data for a Graduate Management Project being undertaken by the hospital administrative resident as a requirement for graduation from a Masters program in Healthcare Administration. They were assured in writing (on the instrument) ,and verbally (through the script), that results would be treated as confidential and anonymous.

Statistical Methods

Once surveys were collected and a data base established, descriptive statistics (means and standard deviations) were run for each group. Inferential statistics (t-test, Chi Square, Regression) were then calculated to detect if any significant differences in levels of satisfaction between the groups existed. The alpha level, or probability, was set at .05 for all tests.

FINDINGS AND UTILITY OF RESULTS

The instrument used for the study proved to be reliable and valid. The sample size was also an adequate number to support the results of the study. The descriptive and inferential statistics show that patients seen in the Family Practice Clinic are more satisfied in all dimensions of health care than patients seen in the Outpatient Clinic.

Instrument Reliability

The internal consistency of the ratings for each dimension on the survey was determined by calculating the alpha coefficients. This was done by employing the Cronbach's Alpha test on SPSS statistical software. The set criterion alpha level of .80 was exceeded for all scales. Estimated alpha coefficients were .91 for Access to Care (with 11 items), .91 for Technical Quality (with 4 items), .90 for Communication (with 3 items), .91 for Choice and Continuity (with 2 items), .94 for Interpersonal Care (with 6 items), and .90 for Outcomes (with 2 items).

Table 1. Reliability and Validity of Major Domains

Domain	Items(N)	Alpha
Access To Care	11	.91
Technical Quality	4	.91
Communication	3	.90
Choice and Continuity	2	.91
Interpersonal Care	6	.94
Outcomes	2	.90

Descriptive Statistics

The Sample

The response rate of the instrument was 87%. The total number of patients asked to participate in the study was 110 from each clinic for a total of 220. Of that number, 29 surveys were discarded due to the respondent's age being below 18 years or because of missing data.

The total sample size used for statistical analysis with the primary instrument was 97 from the Family Practice Clinic and 94 from the Outpatient Clinic (n = 191). The demographic information and geographical differences between the clinics are provided in histogram form in Appendix 5.

Gender

The respondents consisted of 106 males (56 percent) and 85 females (44 percent). The breakdown by clinic was 65 males from the Outpatient Clinic and 41 from the Family Practice Clinic and 29 females from the Outpatient Clinic and 56 from the Family Practice Clinic.

Age

The average age of the total sample was 32. The mean age of respondents from the Family Practice Clinic was 35 while the mean age in the Outpatient Clinic was 29.

Marital Status

Approximately 75 percent of the respondents in the study were married while 15 percent have never been married. Still another 5 percent were separated, 5 percent were divorced, and one respondent was widowed. By clinic, 93 percent of the respondents from Family Practice were married. Only 56 percent of respondents from the Outpatient Clinic were married.

Family Size

The majority (71%) of the respondents from the Family Practice Clinic stated they have between two and four family members (not including themselves) who are seen at the hospital. In contrast, the majority (44%) of those seen in the Outpatient Clinic have no family member seen in the hospital except themselves. This reflects the fact that more respondents from the Family Practice Clinic are married and have dependents being seen in the hospital.

Time Seen In Clinic

It is interesting to note that the majority (60%) of respondents seen in the Family Practice Clinic have been empaneled for less than one year, while the majority (65%) of Outpatient respondents have been seen in that clinic for over one year. This may suggest that the hospital and the Family Practice Clinic have done a poor job of informing single soldiers of their right to sign up for Family Practice empanelment.

Family Practice Results

The mean satisfaction and standard deviation scores for the dimensions, and each question, are presented in Tables 2 and 3. The mean satisfaction scores were more favorable from patients seen in the Family Practice Clinic.

Family Practice Access To Care

In the area of Access to Care the mean scores for the criterion variables ran from 3.40 (between 3 = "Good" and 4 = "Very Good") for making appointments by phone to 4.13 (between 4 = "Very Good" and 5 = "Excellent") for convenience of location. The standard deviations in this dimension ran from .76 to 1.10.

Family Practice Technical Quality

For Technical Quality the means were very positive, running from 3.76 for quality of medical office and facility to 4.17 for skills of the doctor. The standard deviations ran from .73 to .89.

Family Practice Communication

The same was true of Communication as the mean ran from 3.97 for advice to stay healthy to 4.09 for attention to what you say. The standard deviations ran from .75 to .86.

Family Practice Choice and Continuity

Choice reflected a lower mean with 3.45 for choosing a personal doctor as the low, and 3.50 for seeing doctor of choice as the high score. In this dimension the standard deviations ran from 3.45 to 3.50.

Family Practice Interpersonal Care

In the area of Interpersonal Care the patient showed a high level of satisfaction with the low mean being 3.88 for amount of time during visit, to the high of 4.58 for friendliness and courtesy of the doctor. The standard deviations ran from .59 to .87.

Family Practice Outcomes

Outcomes means showed high levels of satisfaction with 4.04 for how much you are helped, to 4.17 for overall quality of care received. The standard deviations ran from .08 to .72.

Family Practice Timeliness

In the area of Timeliness, those seen in the Family Practice Clinic reported the mean length of time to wait between an appointment and the day you actually see the doctor was 2.04 (between 2 = "3 days to 1 week" and 3 = "1 to 2 weeks"). They reported a mean score of 2.46 (between 2 = "10-15 minutes" and 3 = "16 minutes to 1/2 hour") for the time waiting to see the doctor. The mean score for seeing the same doctor reflected a

satisfied customer as the average was 1.75 (between 1 = "Always" to 2 = "Most of the time").

Outpatient Results

The mean satisfaction scores were less favorable from patients seen in the Outpatient Clinic in all dimensions.

Outpatient Access to Care

In the area of Access to Care the mean scores for the criterion variables ran from 2.43 (between 2 = "Fair" and 3 = "Good") for making appointments by phone to 3.29 (between 3 = "Good" and 4 = "Very Good") for services available for prescriptions. The standard deviations in this dimension ran from .82 to 1.04.

Outpatient Technical Quality

For Technical Quality the low mean score was 2.65 for examination and diagnosis to a high of 2.94 for skills of the doctor. The standard deviations ran from .77 to .98.

Outpatient Communication

Communication showed a low mean score of 2.77 for explanations of procedures to a high of 2.90 for advice to stay healthy. The standard deviations ran from .81 to .89.

Outpatient Choice and Continuity

For Choice and Continuity the low was 2.05 for choosing a personal doctor and the high was 3.50 for seeing doctor of choice. The standard deviations ran from .88 to .93.

Outpatient Interpersonal Care

In the area of Interpersonal Care, the low mean score ranged from 2.77 for amount of time during visit to a high mean score of 3.08 for friendliness and courtesy of the doctor. The standard deviations for this dimension ran from .86 to .91.

Outpatient Outcomes

Patients seen in the Outpatient Clinic were unsatisfied with their outcomes. The mean scores in this area ran from a low of 2.81 for how much you are helped to 2.88 for overall quality of care received. The standard deviations ran from .77 to .92.

Outpatient Timeliness

Patients seen in the Outpatient Clinic believe that it takes longer to be seen by the doctor once they make an appointment. Their mean score for this question was 2.64 (between 2 = "3 days to 1 week" and 3 = "1 to 2 weeks"). Once in the doctor's office, they feel their wait to see the doctor is also longer than those seen in the Family Practice Clinic. Their mean score for this question was 3.18 (between 3 = "16 minutes to 1/2 hour" and 4 = "more than 1/2 hour, but less than 45 minutes"). They also

experience seeing the same doctor less often with a mean score of 3.03.

TABLE 2. DESCRIPTIVE AND INFERENTIAL DATA FOR DIMENSIONS (n = 191)

Variable	Family Practice(N=97)		Outpatient (N=94)		t	sig
	Mean	Std. Dev.	Mean	Std.Dev.	Values	levels
Access To Care	3.71	.61	2.80	.57	10.67	<.001
Technical Quality	3.96	.63	2.80	.75	11.56	<.001
Communication	4.05	.69	2.84	.78	11.30	<.001
Choice and Continuity	3.48	1.04	2.08	.86	10.12	<.001
Interpersonal Care	4.36	.53	2.95	.72	15.38	<.001
Outcomes	4.10	.67	2.85	.80	11.83	<.001

TABLE 3. DESCRIPTIVE DATA FOR EACH DIMENSION QUESTION WITHIN CLINIC (N = 191)

Variable	Family Practice (N=97)		Outpatient (N=94)	
	Mean	Std.Dev.	Mean	Std.Dev.
ACCESS TO CARE:				
Convenience of Location	4.13	.87	3.05	.91
Hours of Operation	3.76	.86	2.73	.82
Access to Specialty Care	3.52	.97	2.64	.94
Access to Hospital Care	3.52	.97	2.64	.94
Access to Emergency Care	3.81	.98	3.09	1.04
Making Appointments by Phone	3.40	1.08	2.80	.98
Weight Time at Office	3.45	1.10	2.27	.91
Weight Time for Appointment Visit	3.57	.95	2.59	1.01
Medical Information by Phone	3.50	.95	2.43	.93
Access to Medical Care	3.76	.85	2.89	.85
Services Available for Prescriptions	4.00	.76	3.29	.84
TECHNICAL QUALITY:				
Quality of Medical Office & Facility	3.76	.77	2.86	.77
Examination and Diagnosis	3.89	.89	2.65	.98
Skills - Doctors	4.17	.66	2.94	.86
Thoroughness of Treatment	4.01	.73	2.76	.95
COMMUNICATION:				
Explanations of Procedures	4.07	.75	2.77	.81
Attention to What You Say	4.09	.77	2.85	.98
Advice to Stay Healthy	3.97	.86	2.90	.89
CHOICE AND CONTINUITY:				
Choosing a Personal Doctor	3.45	1.09	2.05	.88
Seeing Doctor of Choice	3.50	1.14	2.11	.93
INTERPERSONAL CARE:				
Friendliness and Courtesy of Doctor	4.58	.59	3.04	.87
Personal Interest Shown	4.34	.63	2.84	.88
Respect and Privacy	4.44	.65	2.90	.91
Reassurance and Support	4.44	.65	2.89	.91
Friendliness and Courtesy of Staff	4.19	.80	3.08	.77
Amount of Time During Visit	3.88	.87	2.77	.86
OUTCOMES:				
How Much You Are Helped	4.04	.08	2.81	.92
Overall Quality of Care Received	4.17	.72	2.88	.77
TIMELINESS:				
Time Between Appointment and Visit	2.04	.95	2.64	1.26
Time Waiting To See Doctor	2.46	.90	3.18	1.25
How Often Do You See Same Doctor	1.75	.65	3.03	.78

DISCUSSION

The results of this study show that patients seen in the Outpatient Clinic are less satisfied with the medical care they receive than patients seen in the Family Practice Clinic at the >.001 significance level. This was the case for all dimensions and questions asked. The results suggest improvements are needed if the goal is to raise the level of satisfaction of those patients seen in the Outpatient Clinic. The overall frequency distributions, means, standard deviations, students t test scores, and significance levels are presented in histogram form in Appendix 3.

Frequency Distributions

Frequency distributions were computed for all questions of each dimension. Frequency distributions are presented in histogram form in Appendix 4. The format shows the dimension at the top of the page followed by the actual question from the instrument. The clinic frequency distributions are displayed next to each other for comparison. The means and standard deviations are also presented for comparison. The students t test scores are displayed at the bottom of the slide along with an explanation of the scale rating scheme.

Interpersonal Care

The dimension that recorded the highest levels of satisfaction by both groups is Interpersonal Care. The Family Practice patients recorded an overall mean score of 4.36 with a standard deviation of .526 for the grouped data. This compared to the patients seen in the Outpatient Clinic who recorded a mean score of 2.95 and a standard deviation of .724 for the grouped data. A comparison between the means showed a statistically significant difference between the groups with a students t score of 15.38 at the >.001 level of significance. This suggests that while both groups were relatively happy with the interpersonal care they received, those in Family Practice were significantly more satisfied with their care.

Although both groups of patients see qualified physicians and staff, those patients from the Outpatient Clinic perceive the staff as less friendly, show less respect or personal interest, and spend less time with them than do the patients seen in Family Practice. This perception may be based on the fact these patients are seen on a first come, first served basis and rarely see the same physician. The patients seen in Family Practice are seen by appointment and see the same physician on a regular basis.

Choice and Continuity

The dimension that recorded the lowest levels of satisfaction for both groups was Choice and Continuity. The mean score for those seen in the Family Practice Clinic was 3.48 with a standard deviation of 1.04 for the grouped data. This compared with a mean score for those seen in the Outpatient Clinic of 2.08 and a standard deviation of .856 for the grouped data. The students t score of 10.12 at the >.001 level of significance reflects a statistically significant difference between how these two groups perceive their ability of choosing a personal doctor and seeing the same doctor.

Although patients seen in the Family Practice Clinic seem relatively satisfied in this dimension, the mean score may suggest they wish more choice when selecting a doctor. The scores for those seen in the Outpatient Clinic merely reflect their frustration at having no choice.

Technical Quality

The respondents from the Outpatient Clinic also felt significantly less satisfied with their medical care in respect to the dimension of Technical Quality. This is reflected in the students t test score of 11.56 at the >.001 level of significance. They recorded an overall mean score of 2.80 with a standard deviation of .746 for the grouped data. Those seen in Family Practice recorded a mean score of 3.96 and a standard deviation of .632 reflecting a more positive perception of the

staff's technical abilities. Perhaps those seen in the Outpatient Clinic feel they receive less technical attention by the physician because of the long waiting lines.

Outcomes

The respondents from the Outpatient Clinic were also significantly less satisfied in the area of Outcomes. This is represented by the students *t* score of 11.83 at the >.001 level of significance between groups. They reported a mean score of 2.85 and a standard deviation of .797 for the grouped data. Patients from the Family Practice Clinic reported a mean score of 4.10 and a standard deviation of .669 for the grouped data.

Communication

The trend continued in the area of Communication as the patients seen in the Outpatient Clinic recorded a mean score of 2.84 and a standard deviation of .783 for the grouped data. The patients from the Family Practice Clinic recorded a mean score of 4.05 and a standard deviation of .688 for the grouped data. The Students *t* score for this dimension was 11.30 between groups at the >.001 level of significance.

Access to Care

Access to Care also saw those patients from the Outpatient Clinic feeling less satisfied than the patients from Family Practice. The mean score recorded from those seen in the

Outpatient Clinic was 2.80 with a standard deviation of .569 for the grouped data. Family Practice patients recorded a mean score of 3.71 with a standard deviation of .612 for the grouped data.

Timeliness

The patients seen in the Outpatient Clinic felt they had to wait longer for doctor appointments than did those patients seen in Family Practice as is represented by a students t score of -3.71 at the >.001 level of significance. Patients from the Outpatient Clinic recorded a mean score of 2.64 (between 2 = "3 days to 1 week" and 3 = "1 to 2 weeks") and a standard deviation of 1.260. Family Practice patients scored a mean of 2.04 and a standard deviation of .946.

Outpatient respondents also felt they waited longer to see the physician once they arrived for the appointment as is represented with the students t score of -4.55 at the >.001 level of significance. They recorded a mean score of 3.18 (between 3 = "16 minutes to 1/2 hour" and 4 = "More than 1/2 hour, but less than 45 minutes") with a standard deviation of 1.253. The Family Practice patients recorded a mean score of 2.46 (between 2 = "10-15 minutes" and 3 = "16 minutes to 1/2 hour") with a standard deviation of .903. Studies have shown, however, that often times patients who are less satisfied with their medical care tend to underestimate the time they wait to see the physician and the time spent with the physician (Smith 1992).

As would be expected, respondents from the Outpatient Clinic felt they rarely saw the same physician when they went for medical care, as is represented by the students t score of -12.34 at the >.001 level of significance. These patients recorded a mean score of 3.03 (between 3 = "Sometimes" and 4 = "Rarely or never") with a standard deviation of .782. Respondents from the Family Practice Clinic recorded a mean score of 1.75 (between 1 = "Always" to 2 = "Most of the time") with a standard deviation of .646.

Demographics

Research has shown there is a high correlational relationship between patient satisfaction and the person's age and gender (Pascoe 1983). For this reason these two variables require particular attention in this study. Thus, age and gender were analyzed for intergroup comparisons looking for bias based on the variables.

In the case of age, the students t score of 4.16 at the >.001 significance level reveals a difference in ages between the two study groups. In order to determine if this difference might bias the results of the study based on the demographic difference between clinics, a correlation matrix was constructed (Table 4). The table reveals a statistically significant relationship between age and all dimensions of patient satisfaction. These positive relationships were then examined using the general linear model procedure discussed in the methods section of this

paper. The findings of the multivariate model for each dimension on age is presented in Table 5.

TABLE 4. CORRELATIONS AMONG KEY VARIABLES

	Tech Qual	Int Care	Comm	Access	Choice	Age
Tech Qual	1.00					
Int Care	.77	1.00				
Comm	.79	.82	1.00			
Access	.76	.69	.67	1.00		
Choice	.71	.66	.71	.72	1.00	
Age	.23	.30	.25	.18	.20	1.00

*Person correlation coefficients are given for each relationship. In all cases there is a statistically significant relationship with age.

TABLE 5. MULITIVARIATE STATISTICS-ANALYSIS OF COVARIANCE (n=191)

Study Variable	F Ratio	Prob	Coefficients of Determination
Tech Qual	44.4	>.001	.65
Int Care	80.7	>.001	.75
Comm	43.1	>.001	.64
Access	37.6	>.001	.61
Choice	33.9	>.001	.59

In the case of the discrete variable gender, the Chi Square Test was employed to evaluate if gender was proportionately distributed across both clinics. Table 6 reveals statistically significant differences between clinics on the independent variable gender. These positive relationships were then examined using the general linear model procedure discussed in the methods section of this paper. The findings of the bivariate for each dimension on age is presented in Table 7.

TABLE 6. X^2 TEST OF INDEPENDENCE OF THE DISCRETE VARIABLE GENDER (n=191)

Study Variable	Fam Prac (n=97)	Outpat (n=94)	X^2 Statistic	df	prob
Gender					
Male	42%	68%	14.0	1	>.001
Female	58%	32%	14.0	1	>.001

TABLE 7. ANOVA ANALYSIS OF THE RELATIONSHIP OF GENDER WITH THE DIMENSIONS OF PATIENT SATISFACTION (n=191)

Variable	Freq	Mean	F Ratio	Prob
Tech Quality				
Male	106	3.25	5.7	>.02
Female	85	3.56		
Access To Care				
Male	106	3.14	6.6	>.01
Female	85	3.41		
Communication				
Male	106	3.32	4.6	>.03
Female	85	3.62		
Choice				
Male	106	2.62	5.2	>.02
Female	85	3.01		
Interpersonal Care				
Male	106	3.51	6.1	>.01
Female	85	3.85		

CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study was to determine if any differences existed in the satisfaction levels between patients seen in the Family Practice and Outpatient Clinics. To accomplish this, a patient satisfaction survey developed by Davies and Ware was used. This instrument offered a focused look at how patients felt about the health care they received. The seven major scales allowed the researcher to identify areas in the clinics that need improvement. This project was the hospital's first extensive attempt to analyze and define levels, and differences, in patient satisfaction in these clinics.

Because the instrument did produce results showing differences in levels of patient satisfaction between clinics, the identified problem areas needed to be addressed. It was felt a committee made up of the professional staff from each clinic could produce the most viable recommendations for improvement. A committee was thus formed to look at the results of the study and make recommendations that would increase the level of patient satisfaction in both clinics.

A full examination and analysis of the committee's recommendations is beyond the scope of this paper. However, the basic premise of the recommendations being discussed is presented below. The committee consists of the Administrative Resident, the Chief of APC, two physicians, and two noncommissioned officers (NCOs) from both the Family Practice and Outpatient

Clinics. These recommendations will focus on priorities of efforts with respect to scarce resources in the hospital and each clinic. The committee focused its attention on three major problem areas based on the information provided by this study, and the consideration of identified limited resources. Those areas are physical space, staff training, and the process of running sick call.

By addressing the problems of physical space, patient satisfaction can be positively affected in the areas of access, technical quality, interpersonal care, and timeliness. By addressing the problems relating to staffing, the committee hopes to affect patient satisfaction in the areas of communication, interpersonal care, and timeliness. If the sick call process can be modified to speed the time patients spend in the "system", patient satisfaction may be positively affected in the areas of access, technical quality, interpersonal care, and timeliness.

The committee agreed that the Outpatient Clinic requires attention in all three areas, while the Family Practice Clinic could benefit from focused training for their staff.

Physical Space

The committee's recommendation in the area of space utilization involves moving the three administrative offices now located in the Outpatient Clinic into the area now occupied by the Physical Examination Section. By doing this, the vacated office space in the Outpatient Clinic can be utilized as

additional treatment rooms. The outpatient physicians believe this will allow them to see patients in a more timely manner. Instead of having a patient wait a long period to be seen, as now experienced, they can be screened and moved into treatment rooms, ready to see the first available physician. It is interesting to note the three administrative offices are already configured as treatment rooms (Appendix 6).

The committee may also commission a Process Action Team to study the prospect of adding more physicians to the Outpatient Clinic. The space created by moving the administrative offices would give any additional physicians adequate treatment rooms.

The Physical Examination Section would relocate to the vacated space in Building 3625 (Appendix 6). This space consists of an area almost twice the size they now occupy in Rooms 32, 34, and 36 in the basement of the main hospital. The space is set up for medical utilization as it was created and utilized as a Teen Clinic. The move would allow the Physical Examination Section to better accommodate patients. It will allow them to centrally locate a hearing booth, two EKG machines, a reception area, physician's office, exam rooms, screening rooms, and an office for the NCO in charge. In the areas they now occupy, staff must relocate patients to other areas of the hospital to get x-rays, hearing tests, and EKGs because of limited space. The move would take this workload off these other services.

Training

The results of the study show the staffs of both clinics could benefit from patient relations training. Part of the communication problems pointed out in the results of the survey may be caused by the civilian receptionist positions in each clinic being eliminated as a result of the drawdown in Europe. These reductions have caused frustration for patients who were accustomed to interacting with the receptionist and the soldiers now manning the position. These positions are now filled by military personnel holding a medical military occupational specialty (MOS). This is normally done on a rotating basis because the clinic chiefs are concerned about the soldiers losing their clinical skills. These soldiers have received little to no training in the area of patient relations and customer service skills.

The committee is recommending a three-pronged attack to solve this problem. When soldiers attend the hospital's newcomers briefing, they will receive a patient relations and customer service block of training from a patient representative. The Patient Assistance Office will also present a training session on patient relations and customer service to both the Family Practice and Outpatient Clinic staffs. All clinics in the hospital will be invited to schedule this same training for their personnel.

Lastly, on the unit's quarterly training day (7 July 1994) a consultant will present training to all hospital personnel on

customer courtesy and service. The Patient Assistance Office will track each clinic's patient relations training.

Another action that will be implemented along the lines of training is to better inform all soldiers and their families of their right to sign up for empanelment into Family Practice. Starting in May, all soldiers will be informed of this right during their inprocessing at the central processing center here in Heidelberg. Units in the Heidelberg area will be asked to also give this information out during their newcomers briefings.

Sick Call

A separate Process Action Team will look at the problems associated with running the "sick call" process in the Outpatient Clinic. The team will consist of one physician, one nurse and one NCO from the Outpatient Clinic, the Chief of the Clinical Support Division, and the Chief of APC. They will look at the possibility of establishing an appointment system for patients in the Outpatient Clinic. Another option may be to set up a triage system whereby patients are seen by priority and not by the time they sign into the clinic. A variation of this option may suggest farming out low priority sick call patients to other clinics the first hour of each day.

Future Research

Because of the numerical disparity between the number of physicians assigned to the Outpatient Clinic and the Family Practice Clinic, a productivity study may prove useful. The results of that study may cause the leadership of the hospital to shift more physicians to the Outpatient Clinic.

It may also be useful in the future to perform another patient satisfaction study on these two clinics. This would allow the organization to measure any change in patient satisfaction attributable to the changes brought about as a result of this study.

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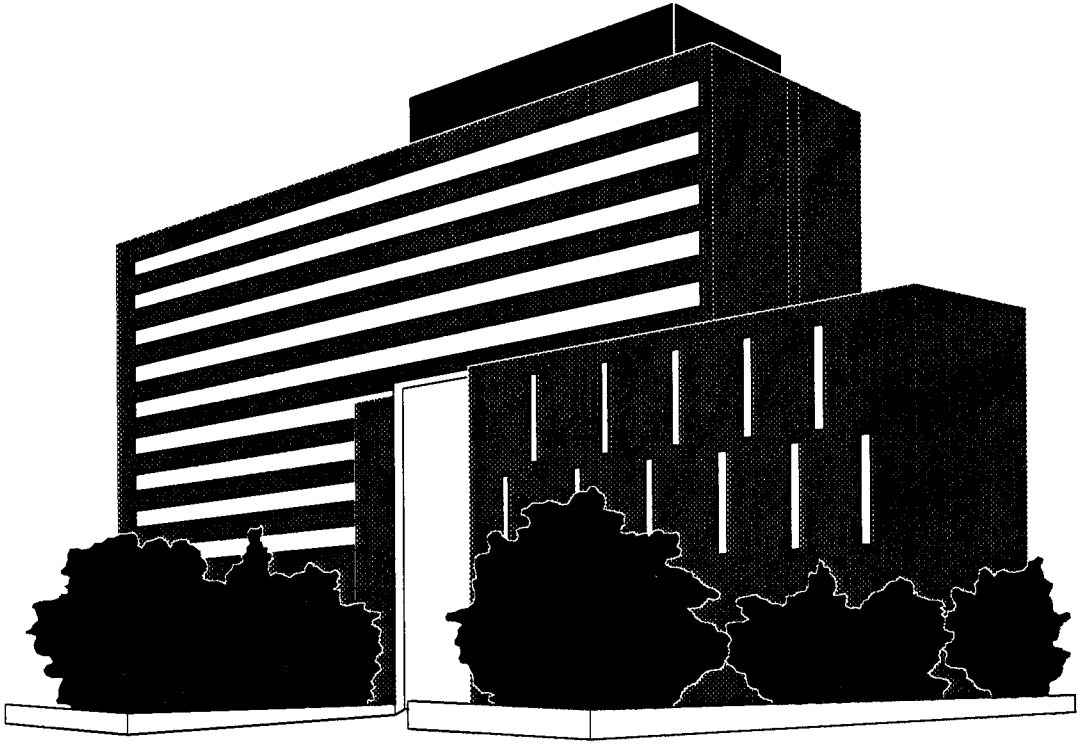
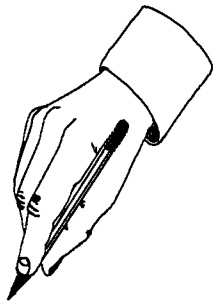
APPENDIX I

FAMILY PRACTICE PATIENT SATISFACTION SURVEY

SURVEY OF VARIOUS FACTORS IN PATIENT SATISFACTION

FAMILY PRACTICE CLINIC





PLEASE ANSWER ALL QUESTIONS IN THE SURVEY AND UPON COMPLETION RETURN TO THE PERSON WHO ADMINISTERED IT TO YOU. COMPLETED SURVEYS WILL BE KEPT CONFIDENTIAL AND ONLY USED FOR STATISTICAL COMPARISON AND POSSIBLE IMPROVEMENTS IN OUR HEALTH CARE SYSTEM. YOUR HELP AND CONSIDERATION IS MOST APPRECIATED.

Strength Through Caring

SURVEY OF THE IMPORTANCE OF VARIOUS FACTORS IN PATIENT SATISFACTION

ACCESS TO CARE	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
1. Convenience of the location of the office.....	1	2	3	4	5
2. Hours when office visits can be scheduled.....	1	2	3	4	5
3. Access to specialty care if you need it.....	1	2	3	4	5
4. Access to hospital care if you need it.....	1	2	3	4	5
5. Access to medical care in an emergency.....	1	2	3	4	5
6. Arrangements for making appointments for medical care by phone.....	1	2	3	4	5
7. Length of time you wait between making an appointment for routine care and the day of your visit.....	1	2	3	4	5
8. Length of time spent waiting at the office to see the doctor....	1	2	3	4	5
9. Availability of medical information or advice by phone..	1	2	3	4	5
10. Access to medical care when you need it.....	1	2	3	4	5
11. Services available for getting prescriptions filled.....	1	2	3	4	5

PLEASE TURN TO NEXT PAGE

TECHNICAL QUALITY	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
12. Completeness and quality of medical office and facilities...	1	2	3	4	5
13. Thoroughness of examinations and accuracy of diagnoses.....	1	2	3	4	5
14. Skills, experience, and training of doctors.....	1	2	3	4	5
15. Thoroughness of treatment.....	1	2	3	4	5

COMMUNICATION	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
16. Explanations of medical procedures and tests.....	1	2	3	4	5
17. Attention given to what you have to say.....	1	2	3	4	5
18. Advice you get about ways to avoid illness and stay healthy.	1	2	3	4	5

CHOICE AND CONTINUITY	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
19. Arrangements for choosing a personal doctor.....	1	2	3	4	5
20. Ease of seeing the doctor of your choice.....	1	2	3	4	5

PLEASE TURN TO NEXT PAGE

INTERPERSONAL CARE	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
21. Friendliness and courtesy shown to you by doctors.....	1	2	3	4	5
22. Personal interest in you and your medical problems.....	1	2	3	4	5
23. Respect shown to you, attention to your privacy.....	1	2	3	4	5
24. Reassurance and support offered to you by doctors and staff....	1	2	3	4	5
25. Friendliness and courtesy shown to you by staff.....	1	2	3	4	5
26. Amount of time you have with doctors and staff during a visit.....	1	2	3	4	5

OUTCOMES	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
27. The outcome of your medical care, how much you are helped..	1	2	3	4	5
28. Overall quality of care and service.....	1	2	3	4	5

PLEASE TURN TO NEXT PAGE

TIMELINESS

29. How long do you usually have to wait between the time you make an appointment for care and the day you actually see a physician?

(Circle One Number)

2 days or less.....1
3 days to 1 week.....2
1 to 2 weeks.....3
3 to 4 weeks.....4
5 to 6 weeks.....5
7 to 8 weeks.....6
More than 8 weeks.....7

30. Once you get to your provider's office, how long do you usually have to wait to see your provider when you have an appointment for care?

Less than 10 minutes.....1
10-15 minutes.....2
16 minutes to 1/2 hour.....3
More than 1/2 hour, but
Less than 45 minutes.....4
45 minutes to 1 hour.....5
More than one hour.....6

31. When you go for medical care, how often do you see the same doctor?

Always.....1
Most of the time.....2
Sometimes.....3
Rarely or never.....4

DEMOGRAPHIC INFORMATION

32. How old were you on your last birthday?
Write in _____.

33. Are you male or female?
(Circle One Number)

Male.....1
Female.....2

34. Which of the following best describes your current marital status?
(Circle One Number)

Never Married.....1
Married.....2
Separated.....3
Divorced.....4
Widowed.....5

PLEASE TURN TO NEXT PAGE

35. How many of your family members (not including yourself) are seen at this hospital?

Write in _____.

36. How long have you been impanelled/using the Family Practice Clinic? (Circle One Number)

6 months or less.....1
6 months to 1 year.....2
1 year to 2 years.....3
3 years or more.....4

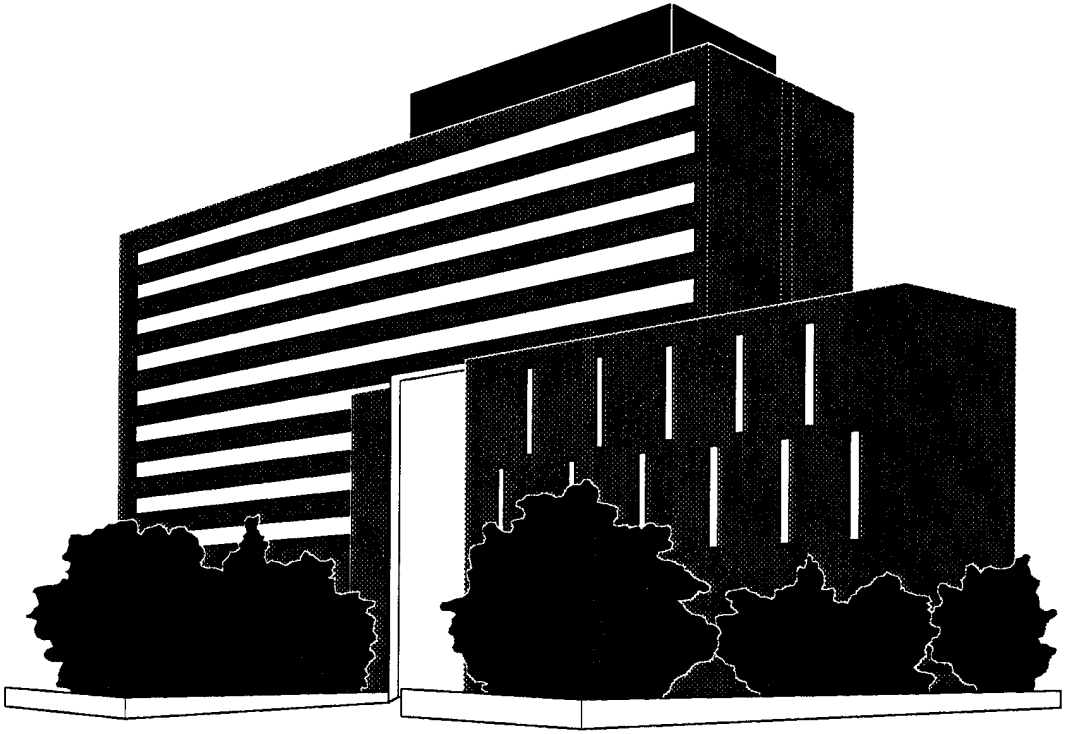
END OF SURVEY

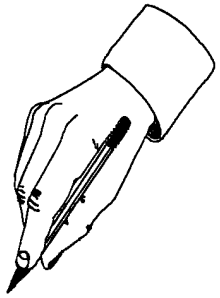
APPENDIX II

OUTPATIENT PATIENT SATISFACTION SURVEY

SURVEY OF VARIOUS FACTORS IN PATIENT SATISFACTION

OUTPATIENT CLINIC





PLEASE ANSWER ALL QUESTIONS IN THE SURVEY AND UPON COMPLETION RETURN TO THE PERSON WHO ADMINISTERED IT TO YOU. COMPLETED SURVEYS WILL BE KEPT CONFIDENTIAL AND ONLY USED FOR STATISTICAL COMPARISON AND POSSIBLE IMPROVEMENTS IN OUR HEALTH CARE SYSTEM. YOUR HELP AND CONSIDERATION IS MOST APPRECIATED.

Strength Through Caring

SURVEY OF THE IMPORTANCE OF VARIOUS FACTORS IN PATIENT SATISFACTION

ACCESS TO CARE	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
1. Convenience of the location of the office.....	1	2	3	4	5
2. Hours when office visits can be scheduled.....	1	2	3	4	5
3. Access to specialty care if you need it.....	1	2	3	4	5
4. Access to hospital care if you need it.....	1	2	3	4	5
5. Access to medical care in an emergency.....	1	2	3	4	5
6. Arrangements for making appointments for medical care by phone.....	1	2	3	4	5
7. Length of time you wait between making an appointment for routine care and the day of your visit.....	1	2	3	4	5
8. Length of time spent waiting at the office to see the doctor....	1	2	3	4	5
9. Availability of medical information or advice by phone..	1	2	3	4	5
10. Access to medical care when you need it.....	1	2	3	4	5
11. Services available for getting prescriptions filled.....	1	2	3	4	5

PLEASE TURN TO NEXT PAGE

TECHNICAL QUALITY	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
12. Completeness and quality of medical office and facilities...	1	2	3	4	5
13. Thoroughness of examinations and accuracy of diagnoses.....	1	2	3	4	5
14. Skills, experience, and training of doctors.....	1	2	3	4	5
15. Thoroughness of treatment.....	1	2	3	4	5

COMMUNICATION	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
16. Explanations of medical procedures and tests.....	1	2	3	4	5
17. Attention given to what you have to say.....	1	2	3	4	5
18. Advice you get about ways to avoid illness and stay healthy.	1	2	3	4	5

CHOICE AND CONTINUITY	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
19. Arrangements for choosing a personal doctor.....	1	2	3	4	5
20. Ease of seeing the doctor of your choice.....	1	2	3	4	5

PLEASE TURN TO NEXT PAGE

INTERPERSONAL CARE	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
21. Friendliness and courtesy shown to you by doctors.....	1	2	3	4	5
22. Personal interest in you and your medical problems.....	1	2	3	4	5
23. Respect shown to you, attention to your privacy.....	1	2	3	4	5
24. Reassurance and support offered to you by doctors and staff....	1	2	3	4	5
25. Friendliness and courtesy shown to you by staff.....	1	2	3	4	5
26. Amount of time you have with doctors and staff during a visit.....	1	2	3	4	5

OUTCOMES	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
27. The outcome of your medical care, how much you are helped..	1	2	3	4	5
28. Overall quality of care and service.....	1	2	3	4	5

PLEASE TURN TO NEXT PAGE

TIMELINESS

29. How long do you usually have to wait between the time you make an appointment for care and the day you actually see a physician?

(Circle One Number)

2 days or less.....1
3 days to 1 week.....2
1 to 2 weeks.....3
3 to 4 weeks.....4
5 to 6 weeks.....5
7 to 8 weeks.....6
More than 8 weeks.....7

30. Once you get to your provider's office, how long do you usually have to wait to see your provider when you have an appointment for care?

Less than 10 minutes.....1
10-15 minutes.....2
16 minutes to 1/2 hour.....3
More than 1/2 hour, but
Less than 45 minutes.....4
45 minutes to 1 hour.....5
More than one hour.....6

31. When you go for medical care, how often do you see the same doctor?

Always.....1
Most of the time.....2
Sometimes.....3
Rarely or never.....4

DEMOGRAPHIC INFORMATION

32. How old were you on your last birthday?
Write in _____.

33. Are you male or female?
(Circle One Number)

Male.....1
Female.....2

34. Which of the following best describes your current marital status?
(Circle One Number)

Never Married.....1
Married.....2
Separated.....3
Divorced.....4
Widowed.....5

PLEASE TURN TO NEXT PAGE

35. How many of your family members (not including yourself) are seen at this hospital?

Write in _____.

36. How long have you been using the Outpatient Clinic?
(Circle One Number)

6 months or less.....1
6 months to 1 year.....2
1 year to 2 years.....3
3 years or more.....4

END OF SURVEY

APPENDIX III

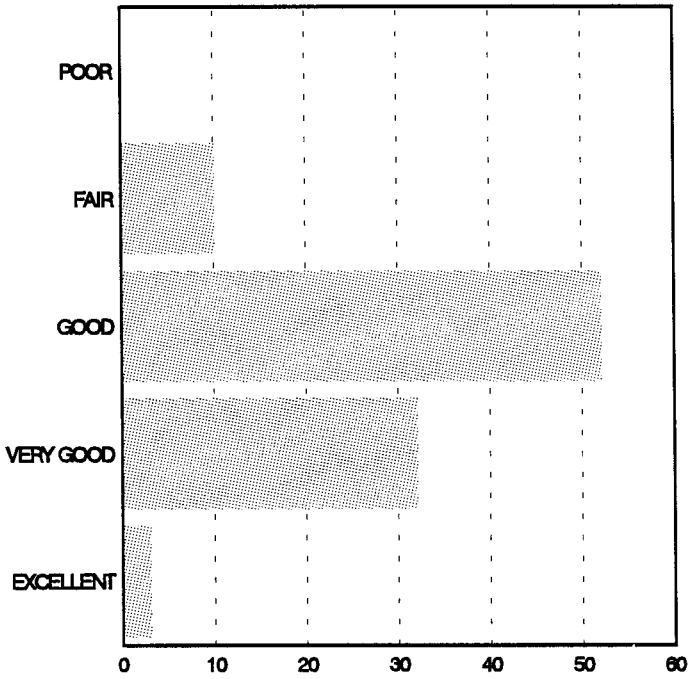
FREQUENCY DISTRIBUTION FOR DIMENSIONS

ACCESS TO CARE

Questions 1- 11

FAMILY PRACTICE

TOTAL RESPONDENTS 97

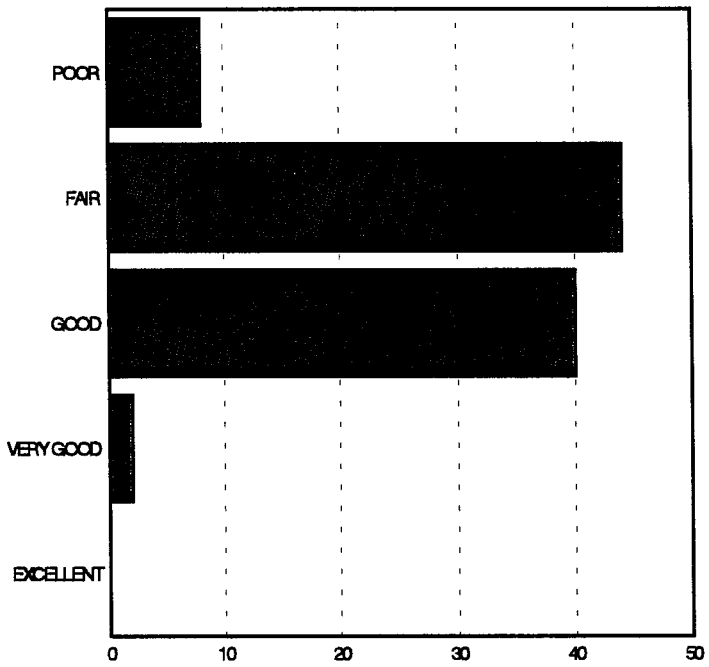


MEAN = 3.71

SD = .612

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 2.80

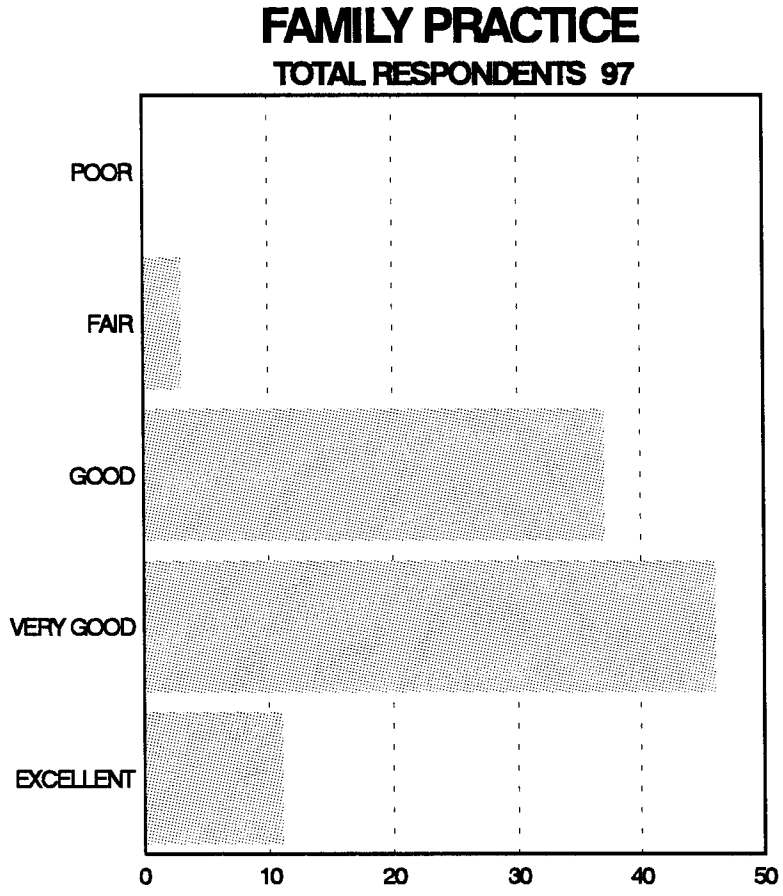
SD = .569

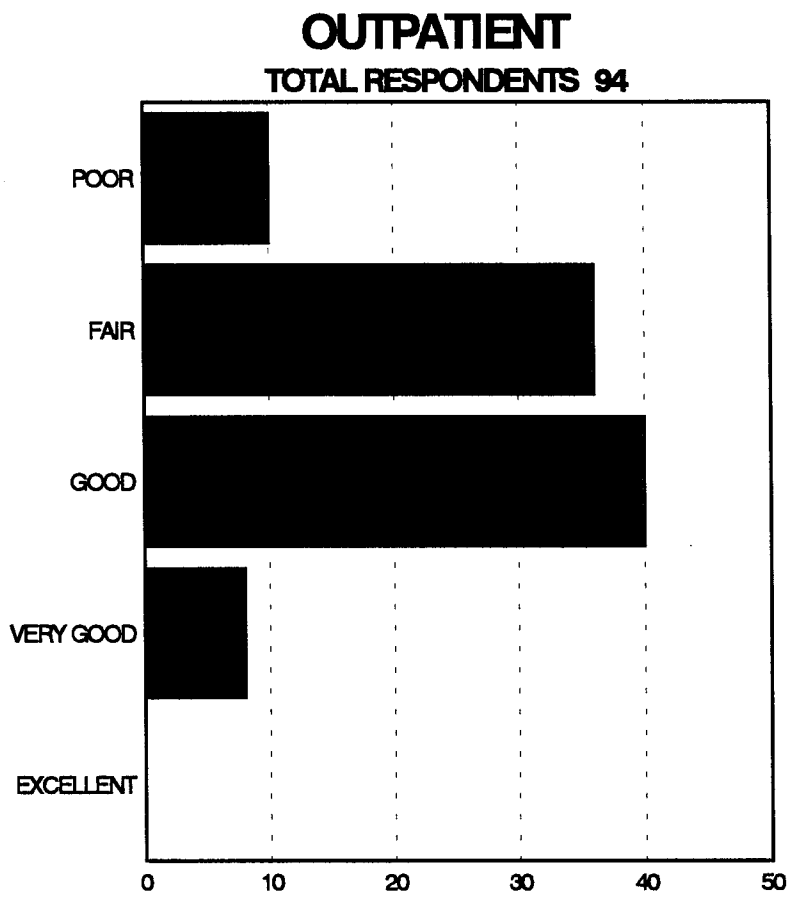
t = 10.67

* Five point scale ratings from 1 = poor to 5 = excellent, $p < .001$ with 189 degrees of freedom.

TECHNICAL QUALITY

Questions 12-15





MEAN = 3.96
SD = .632

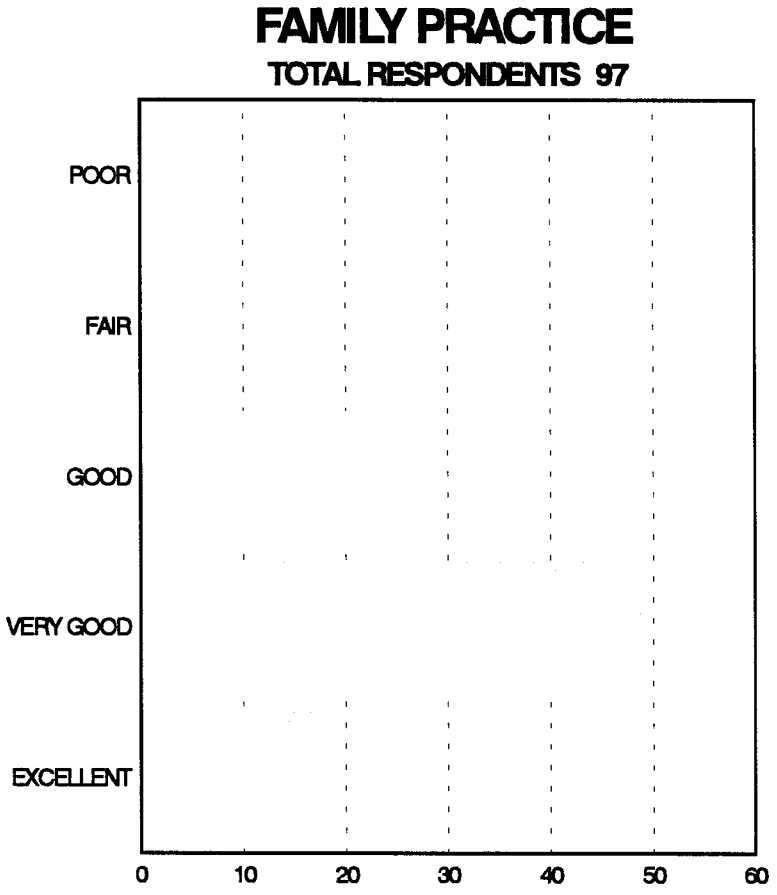
t = 11.56

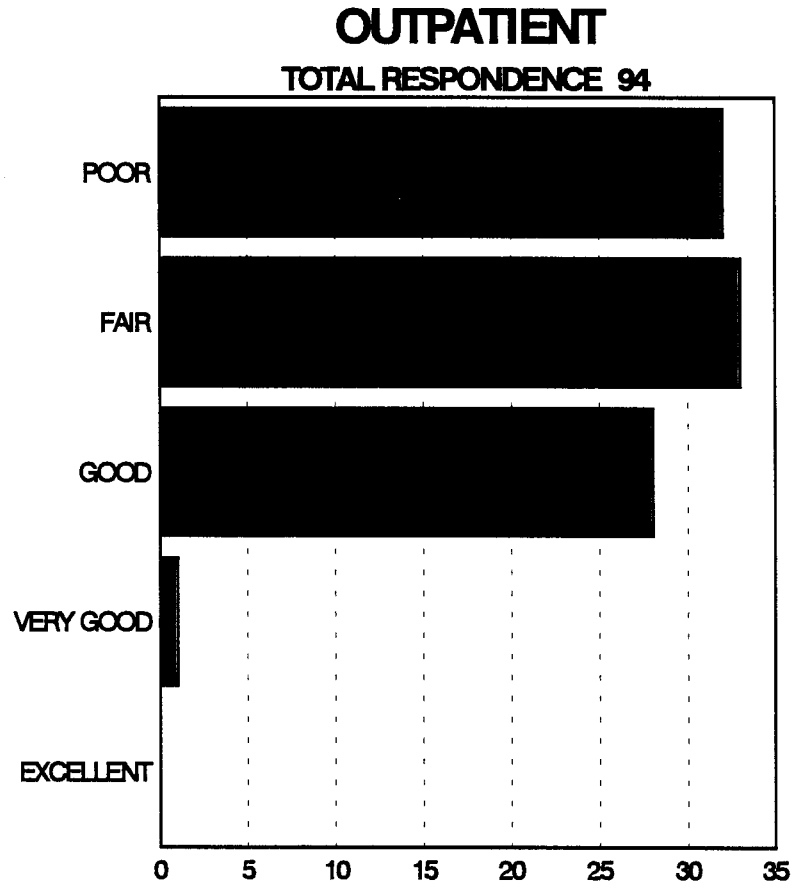
MEAN = 2.80
SD = .746

* Five point scale ratings from 1 = poor to 5 = excellent, $p < .001$ with 189 degrees of freedom.

COMMUNICATION

Questions 16-18





MEAN = 4.05
SD = .688

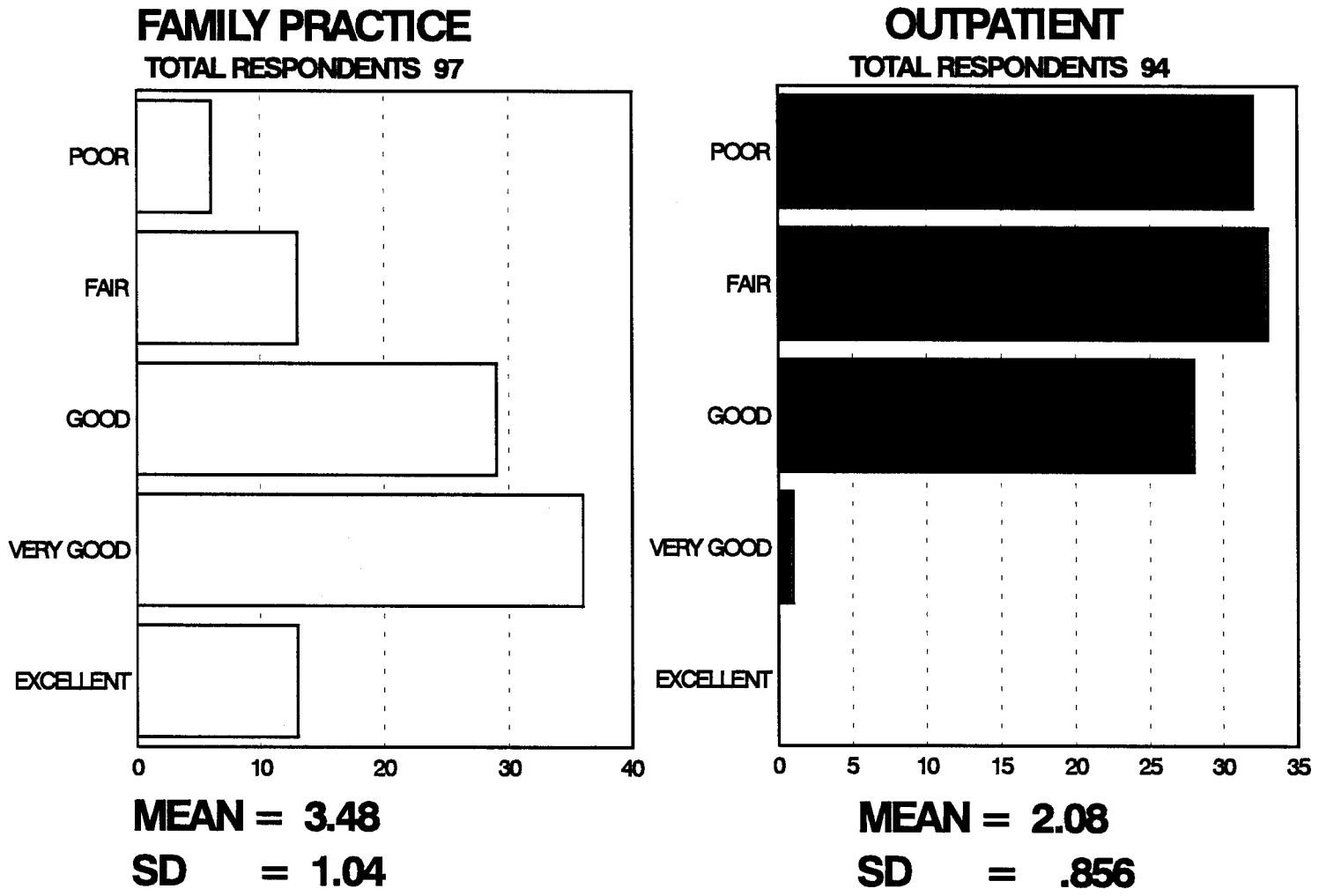
t = 11.30

MEAN = 2.84
SD = .783

* Five point scale ratings from 1 = poor to 5 = excellent, $p < .001$ with 189 degrees of freedom.

CHOICE & CONTINUITY

Questions 19-20



t =10.12

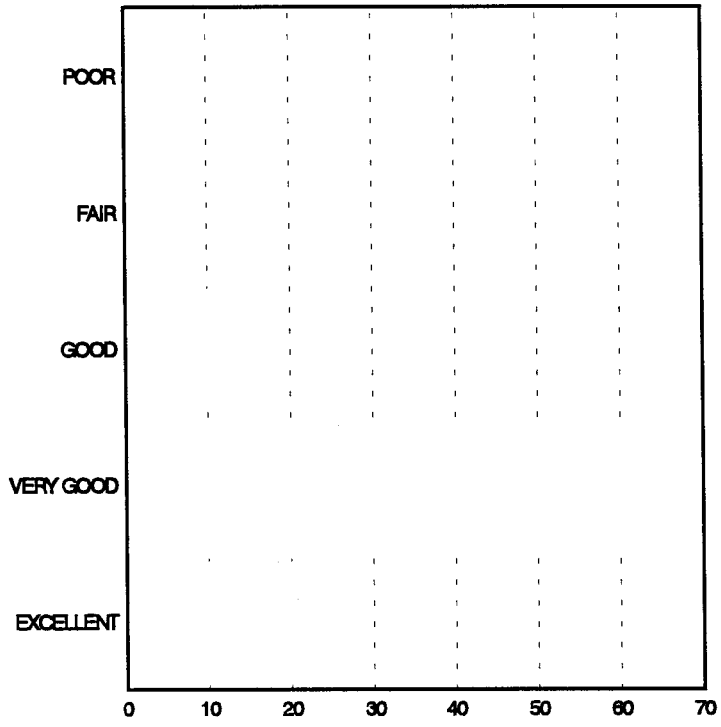
* Five point scale ratings from 1 = poor to 5 = excellent, p< .001 with 189 degrees of freedom.

INTERPERSONAL CARE

Questions 21-26

FAMILY PRACTICE

TOTAL RESPONDENTS 97

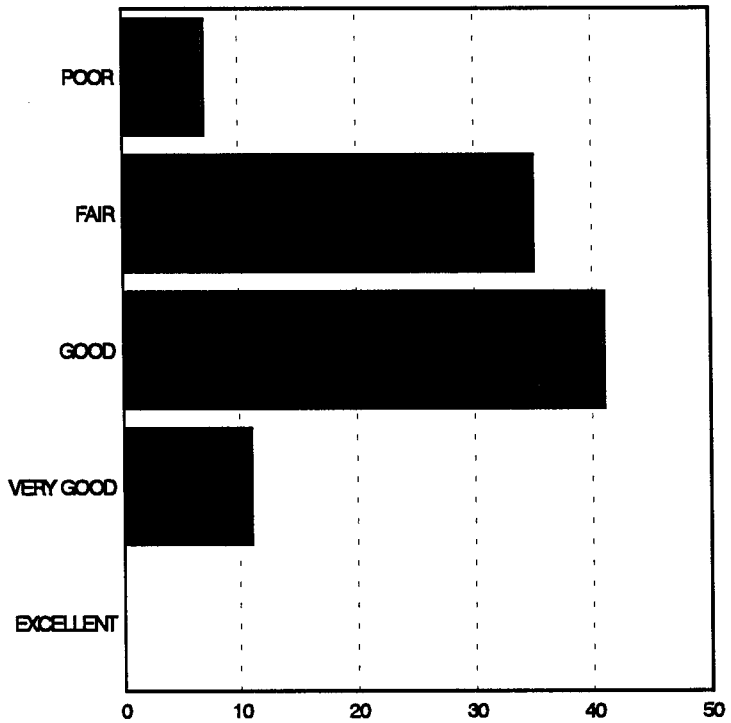


MEAN = 4.36

SD = .526

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 2.95

SD = .724

t = 15.38

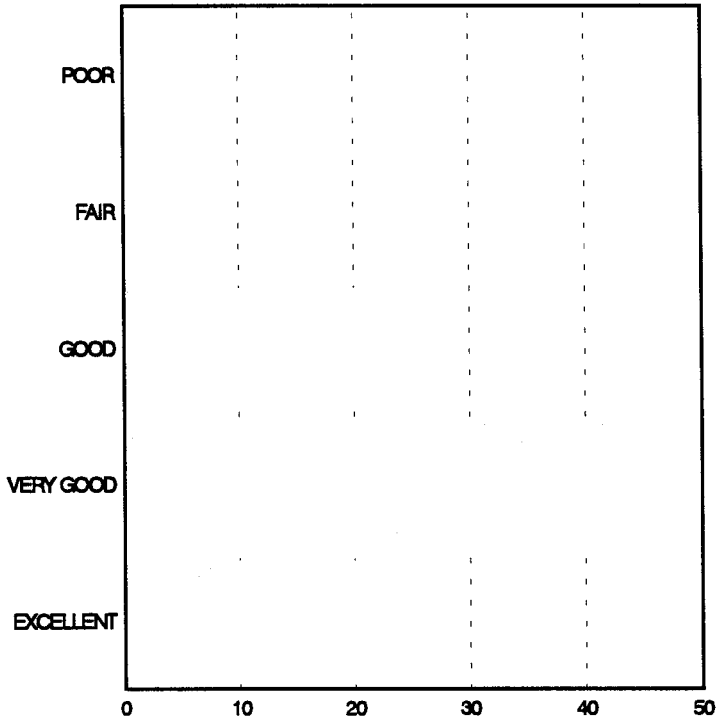
* Five point scale ratings from 1 = poor to 5 = excellent, $p < .001$ with 189 degrees of freedom.

OUTCOMES

Questions 27-28

FAMILY PRACTICE

TOTAL RESPONDENTS 97

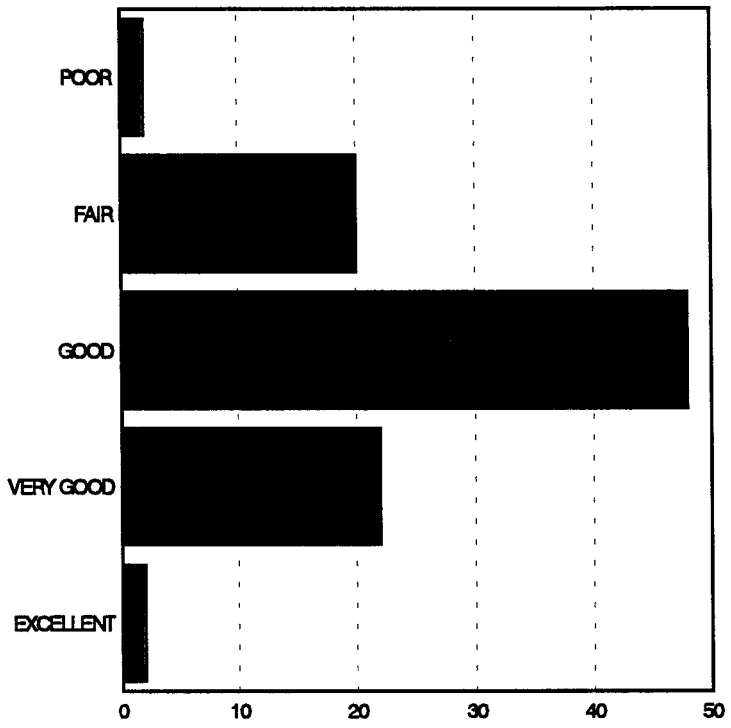


MEAN = 4.10

SD = .669

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 2.85

SD = .797

t = 11.83

* Five point scale ratings from 1 = poor to 5 = excellent, p< .001 with 189 degrees of freedom.

APPENDIX IV

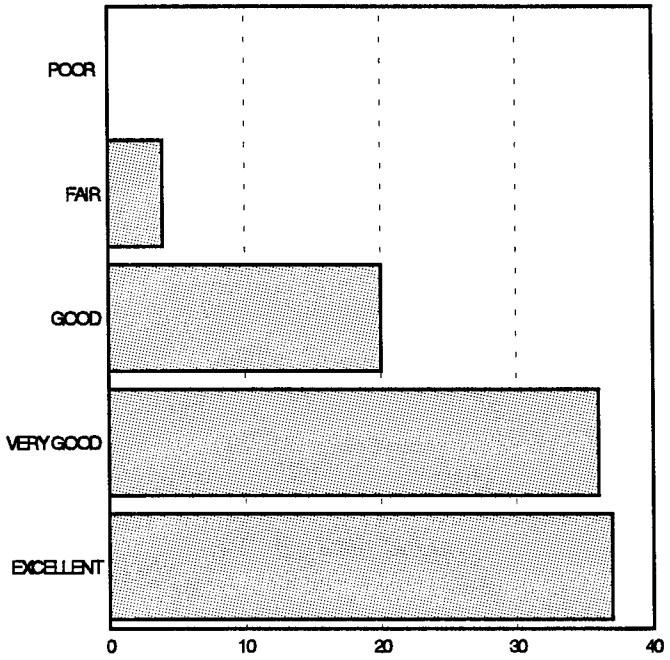
FREQUENCY DISTRIBUTION FOR EACH QUESTION

ACCESS TO CARE QUESTION #1

CONVENIENCE OF THE LOCATION OF THE OFFICE

FAMILY PRACTICE

TOTAL RESPONDENTS 97

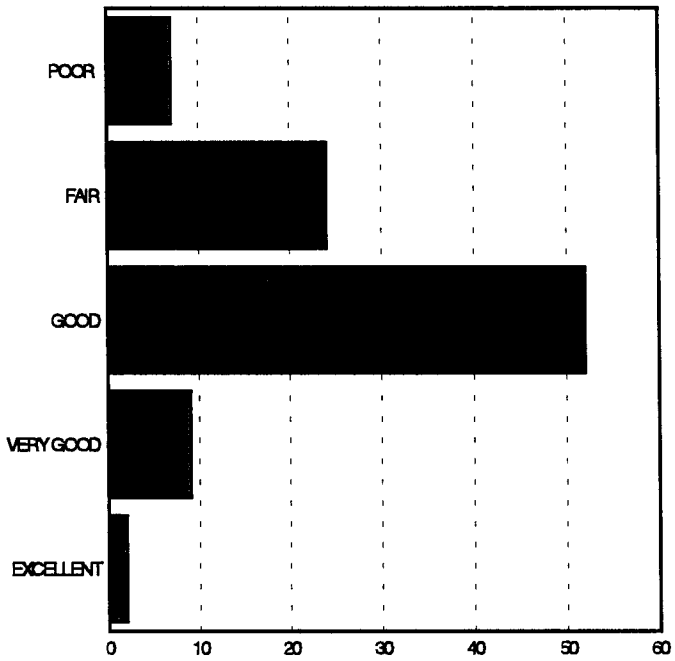


MEAN = 4.093

SD = .867

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 3.053

SD = .908

t = 8.09

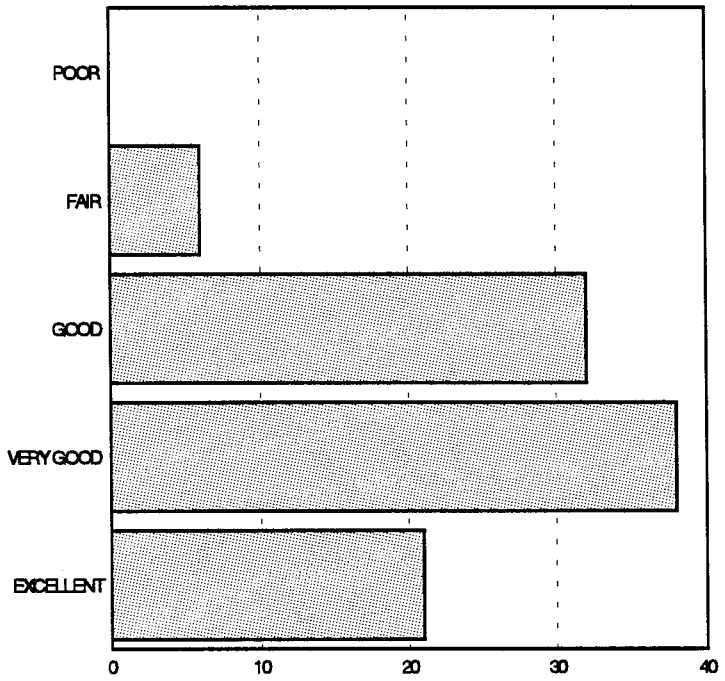
* Five point scale ratings ranged from 1 = poor to 5 = excellent, $p<.001$ with 189 degrees of freedom.

ACCESS TO CARE QUESTION # 2

HOURS WHEN OFFICE VISITS CAN BE SCHEDULED

FAMILY PRACTICE

TOTAL RESPONDENTS 97

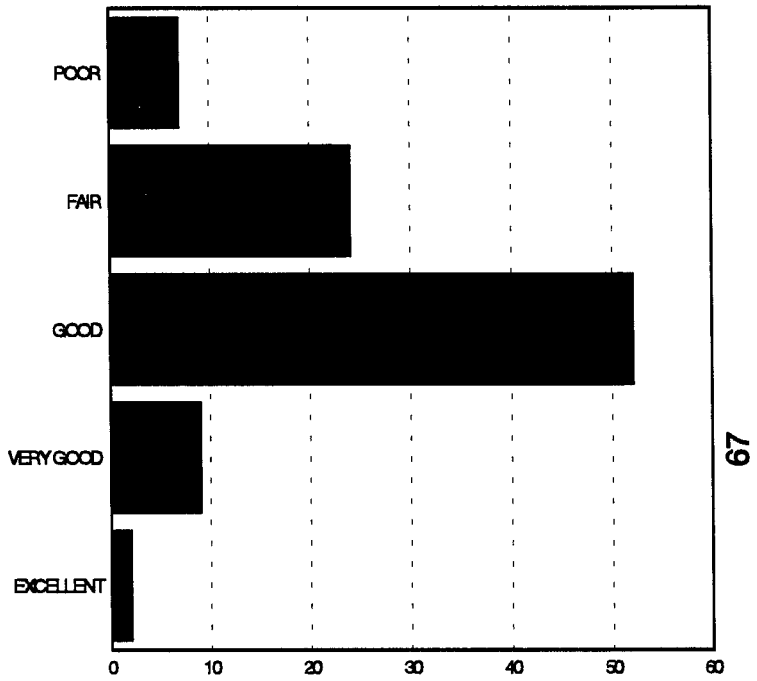


MEAN = 3.763

SD = .863

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 2.734

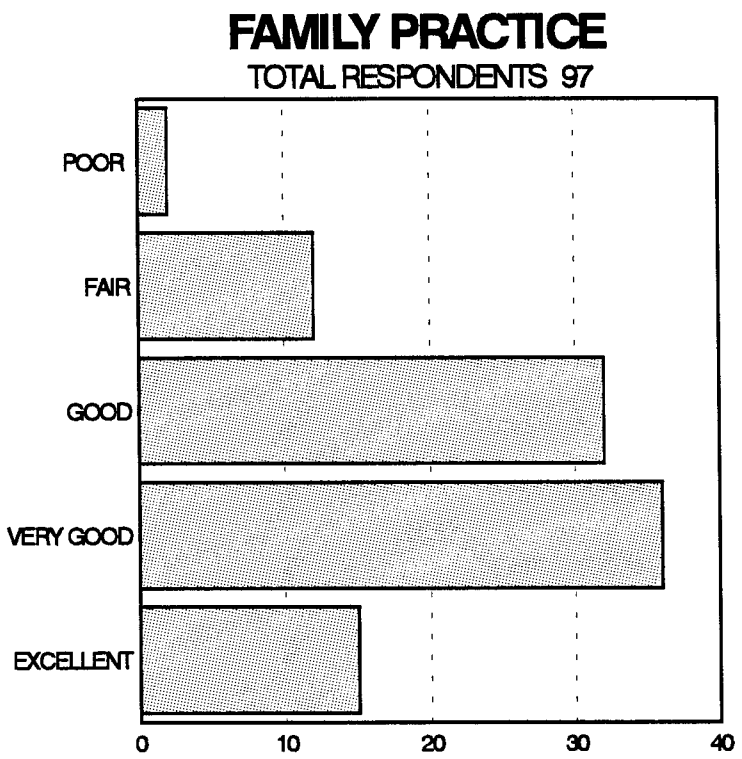
SD = .819

t = 8.45

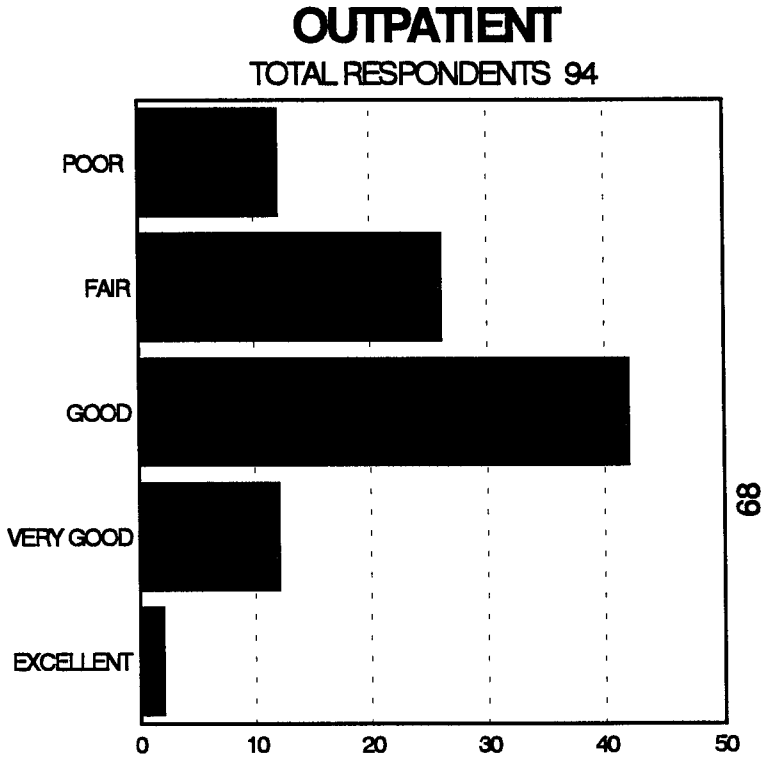
* Five point scale rating ranged from 1 = poor to 5 = excellent, p<. 001 with 189 degrees of freedom.

ACCESS TO CARE QUESTION #3

ACCESS TO SPECIALTY IF YOU NEEDED IT



MEAN = 3.516
SD = .969



MEAN = 2.638
SD = .937

t = 6.35

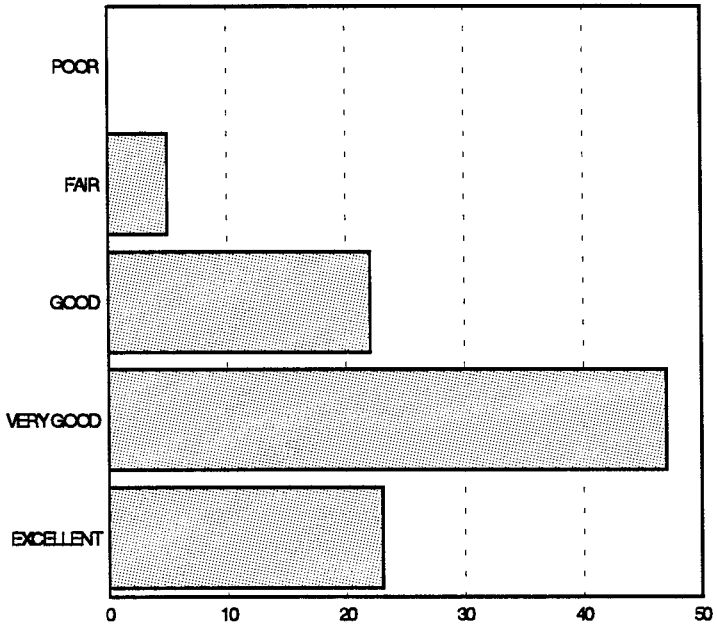
* Five point scale rating ranged from 1 = poor to 5 = excellent, p< .001 with 189 degrees of freedom.

ACCESS TO CARE QUESTION #4

ACCESS TO HOSPITAL CARE IF YOU NEEDED IT

FAMILY PRACTICE

TOTAL RESPONDENTS 97

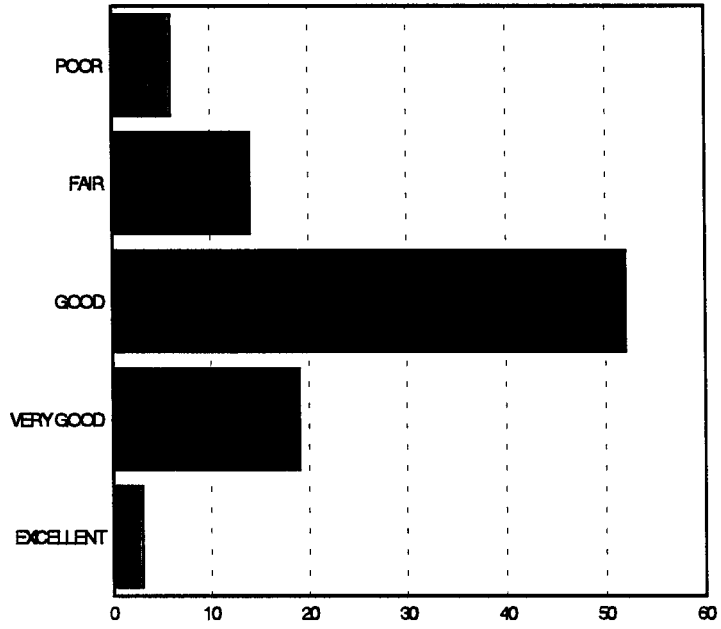


MEAN = 3.516

SD = .969

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 2.639

SD = .937

t = 6.35

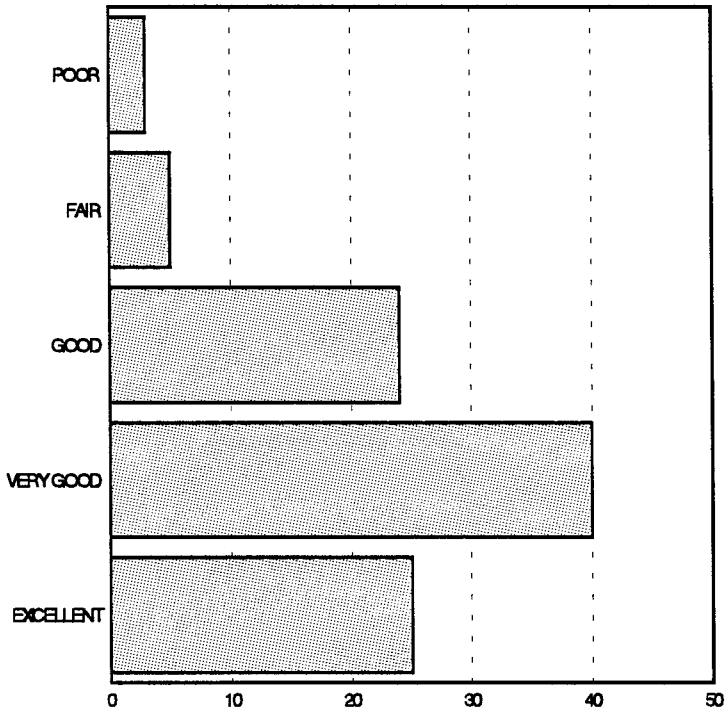
* Five point scale ratings ranged from 1 = poor to 5 = excellent, $p < .001$ with 189 degrees of freedom.

ACCESS TO CARE QUESTION #5

ACCESS TO MEDICAL CARE IN AN EMERGENCY

FAMILY PRACTICE

TOTAL RESPONDENTS 97

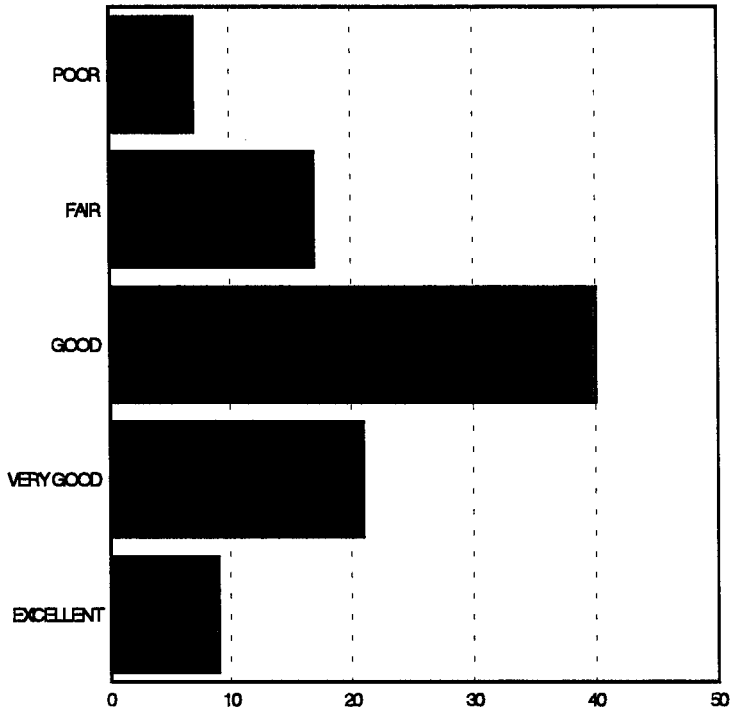


MEAN = 3.814

SD = .982

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 3.085

SD = 1.044

t = 4.97

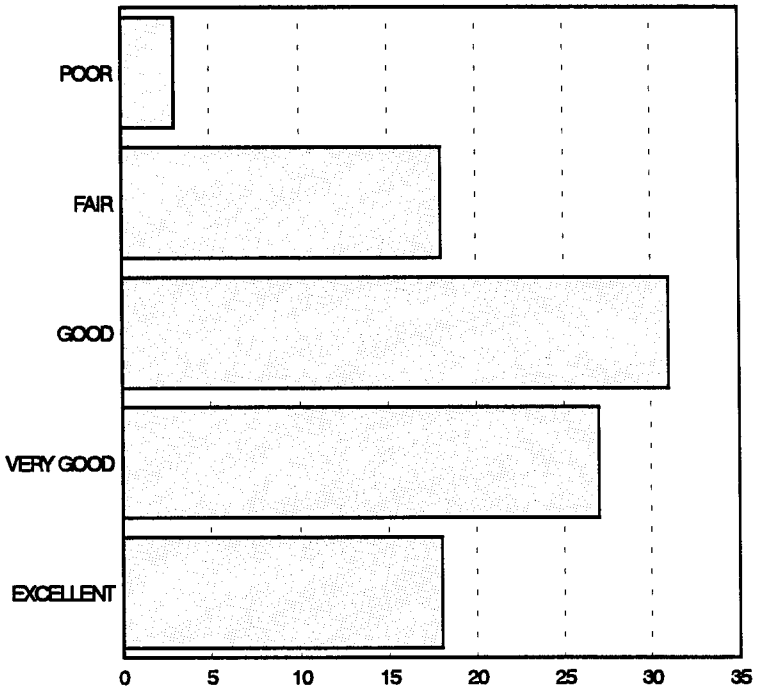
* Five point scale ratings ranged from 1 = poor to 5 = excellent, p< .001 with 189 degrees of freedom.

ACCESS TO CARE QUESTION #6

ARRANGEMENTS FOR MAKING APPOINTMENTS FOR MEDICAL CARE BY PHONE

FAMILY PRACTICE

TOTAL RESPONDENTS 97

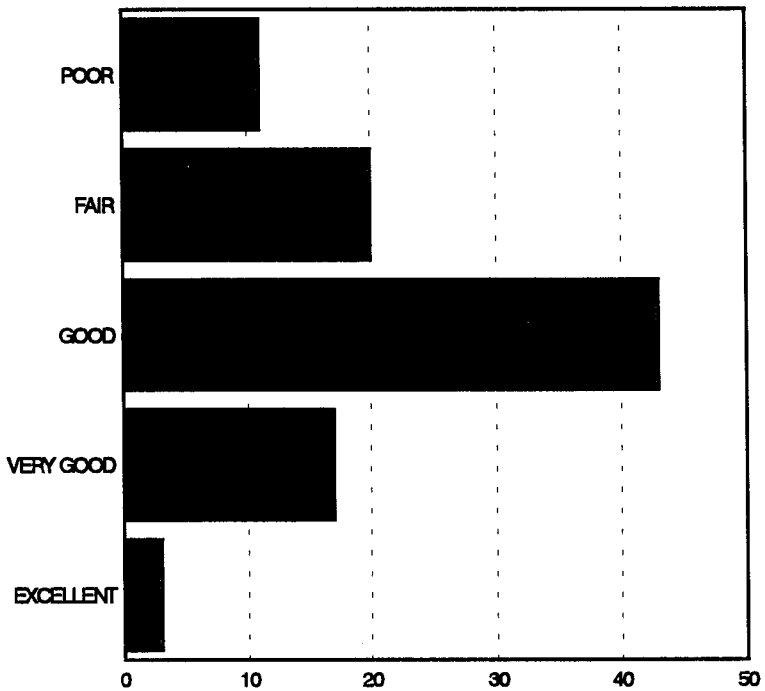


MEAN = 3.402

SD = 1.086

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 2.798

SD = .979

t = 4.97

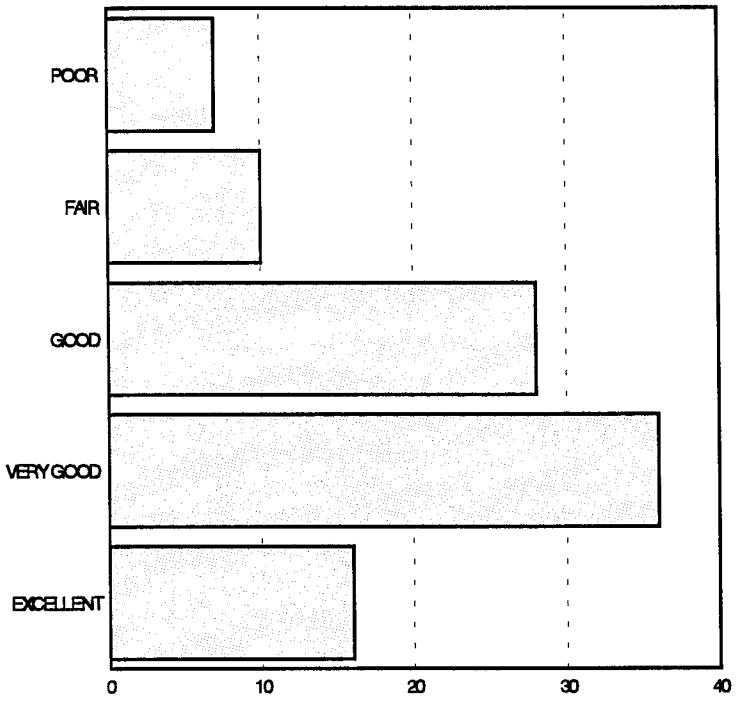
* Five point scale ratings ranged from 1 = poor to 5 = excellent, p< .001 with 189 degrees of freedom.

ACCESS TO CARE QUESTION # 7

LENGTH OF TIME YOU WAIT BETWEEN MAKING AN APPOINTMENT FOR ROUTINE CARE AND THE DAY OF YOUR VISIT

FAMILY PRACTICE

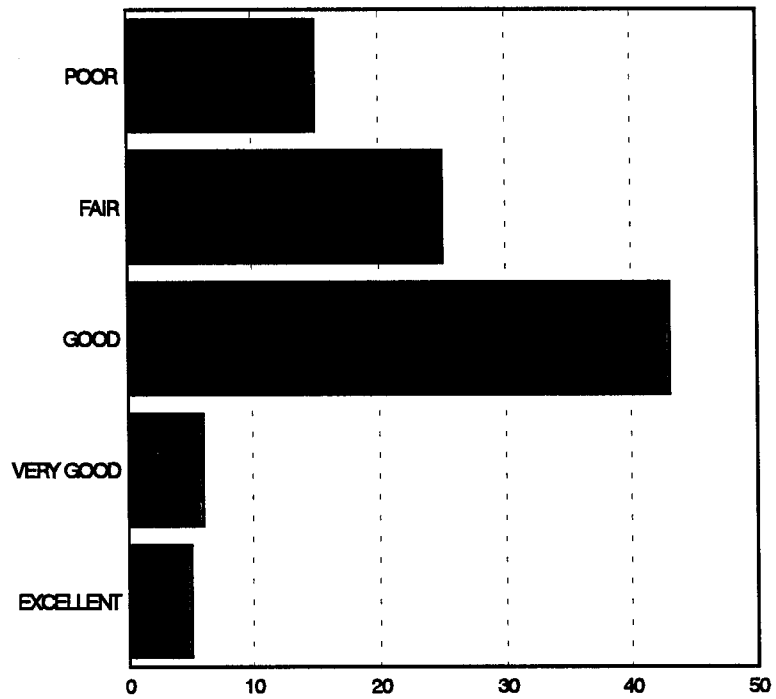
TOTAL RESPONDENTS 97



MEAN = 3.454
SD = 1.109

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 2.585
SD = 1.010

t = 5.65

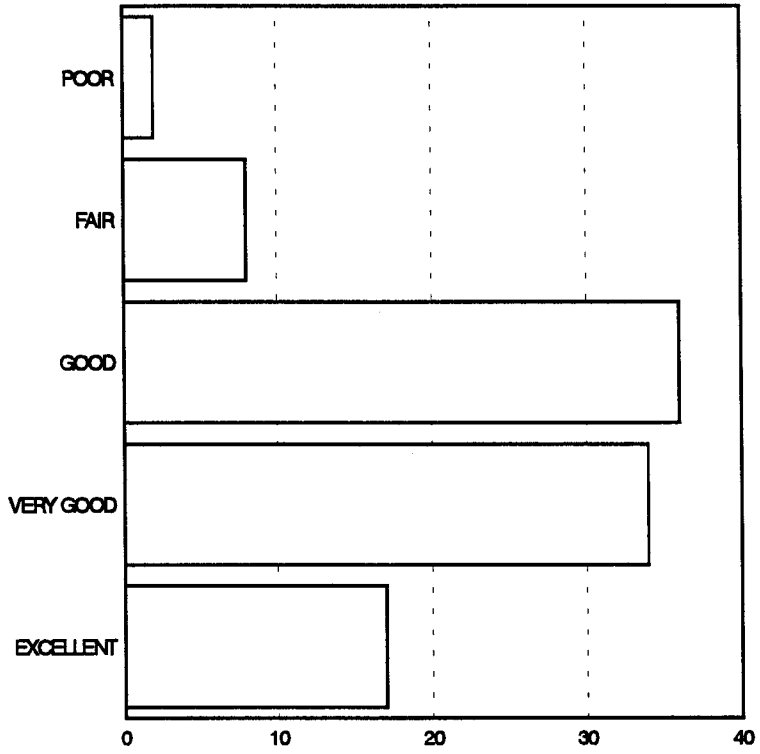
* Five point scale ratings ranged from 1 = poor to 5 = excellent, $p < .001$ with 189 degrees of freedom.

ACCESS TO CARE QUESTION #8

LENGTH OF TIME SPENT WAITING AT THE OFFICE TO SEE THE DOCTOR

FAMILY PRACTICE

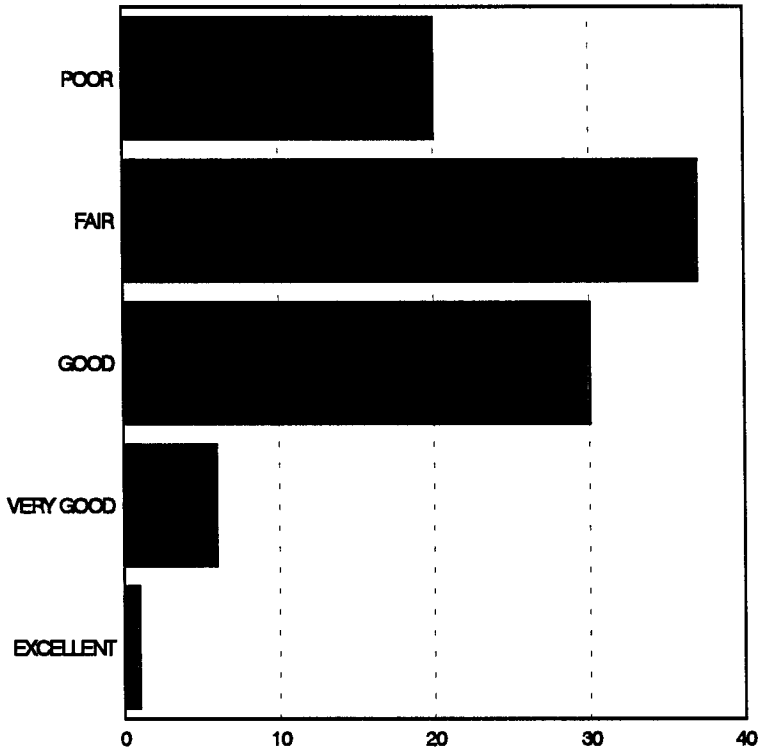
TOTAL RESPONDENTS 97



MEAN = 3.577
SD = .945

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 2.266
SD = .906

t = 9.79

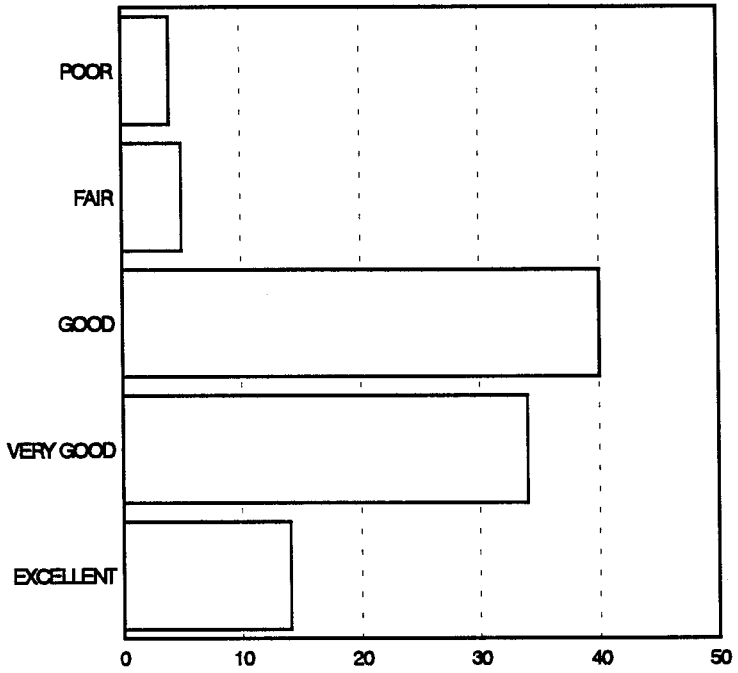
* Five point scale ratings ranged from 1 = poor to 5 = excellent, $p < .001$ with 189 degrees of freedom.

ACCESS TO CARE QUESTION #9

AVAILABILITY OF MEDICAL INFORMATION OR ADVICE BY PHONE

FAMILY PRACTICE

TOTAL RESPONDENTS 97

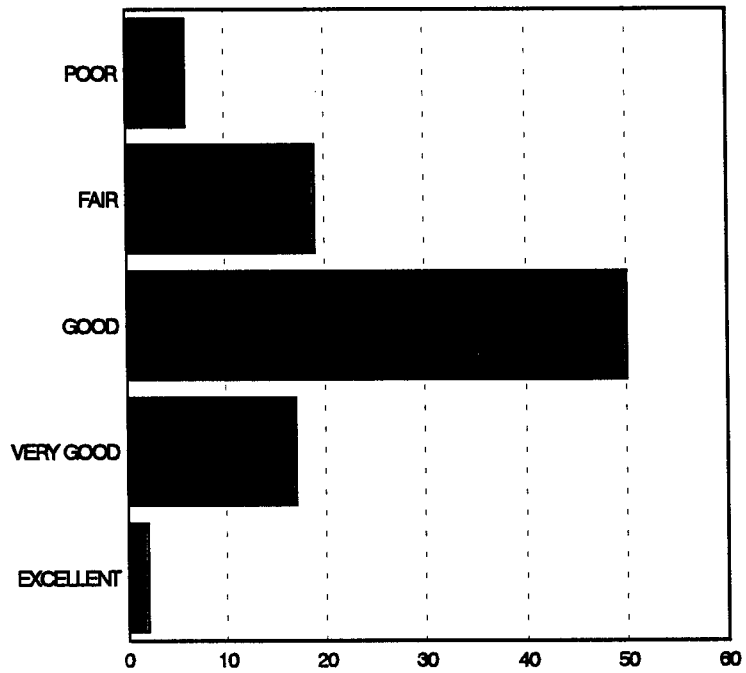


MEAN = 3.505

SD = .948

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 2.426

SD = .933

t = 7.93

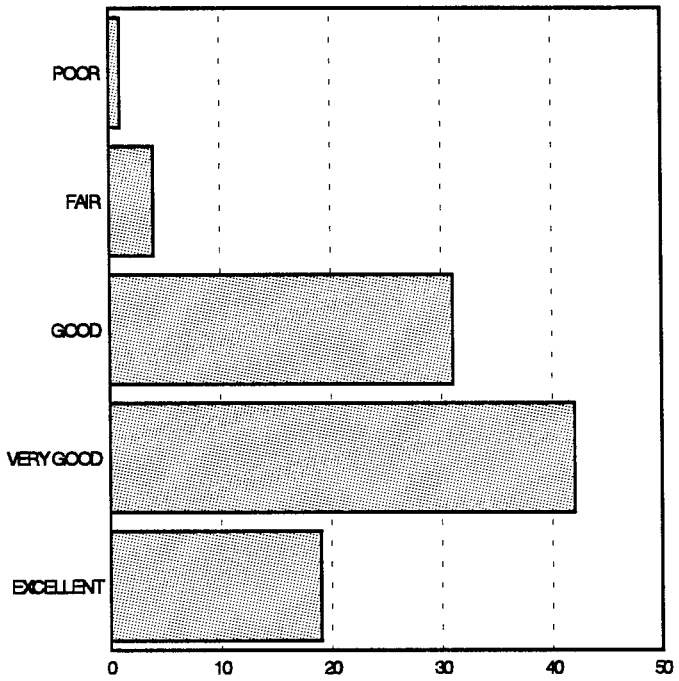
*Five point scale ratings ranged from 1 = poor to 5 = excellent, p< .001 with 189 degrees of freedom.

ACCESS TO CARE QUESTION #10

ACCESS TO MEDICAL CARE WHEN YOU NEED IT

FAMILY PRACTICE

TOTAL RESPONDENTS 97

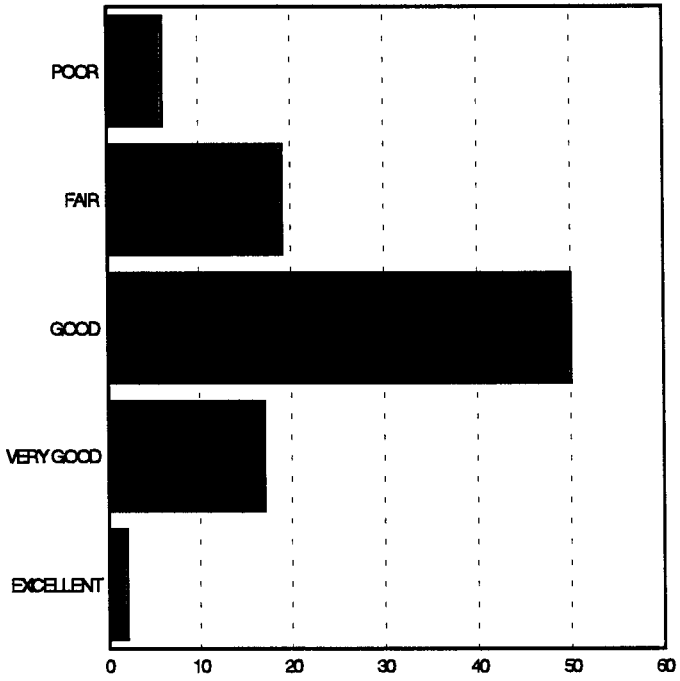


MEAN = 3.763

SD = .851

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 2.894

SD = .848

t = 7.07

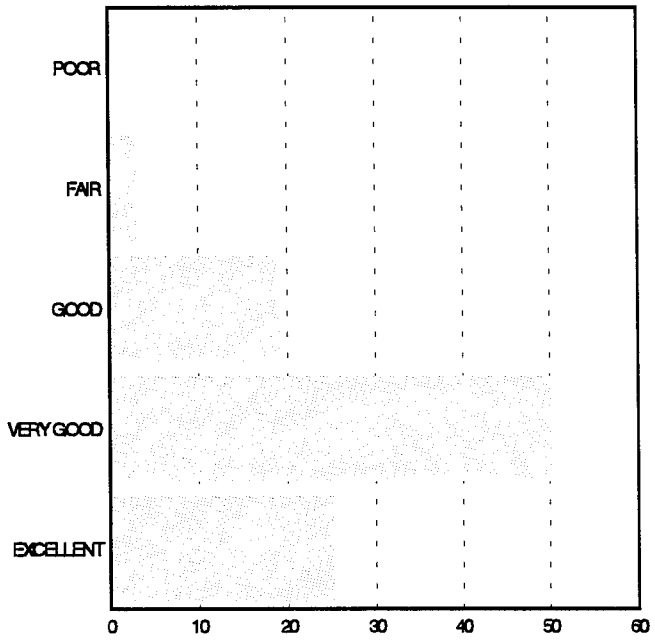
*Five point scale ratings ranged from 1 = poor to 5 = excellent, $p < .001$ with 189 degrees of freedom.

ACCESS TO CARE QUESTION #11

SERVICE AVAILABLE FOR GETTING PRESCRIPTIONS FILLED

FAMILY PRACTICE

TOTAL RESPONDENTS 97

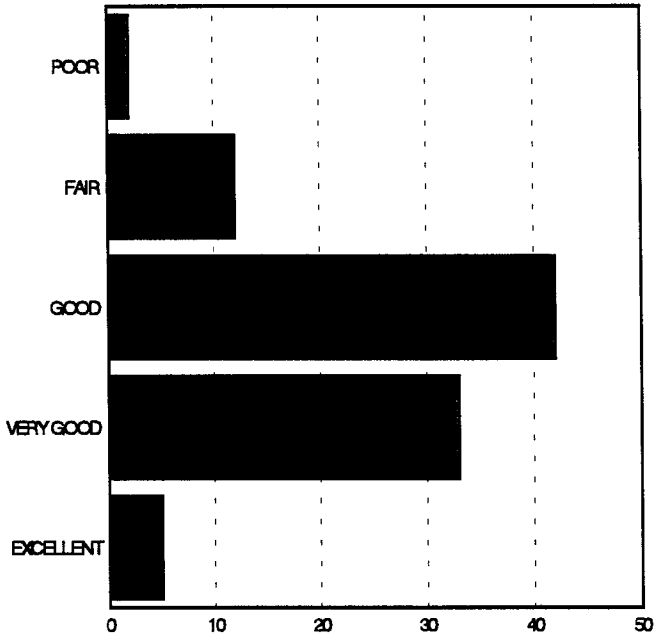


MEAN = 4.000

SD = .764

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 3.287

SD = .838

t = 6.15

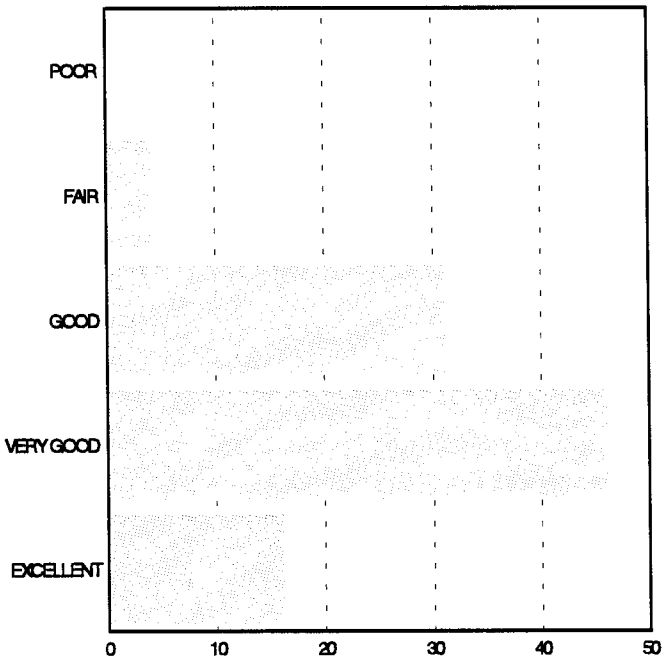
*Five point scale ratings ranged from 1 = poor to 5 = excellent, $p < .001$ with 189 degrees of freedom.

TECHNICAL QUALITY QUESTION #12

COMPLETENESS AND QUALITY OF MEDICAL OFFICE AND FACILITIES

FAMILY PRACTICE

TOTAL RESPONDENTS 97

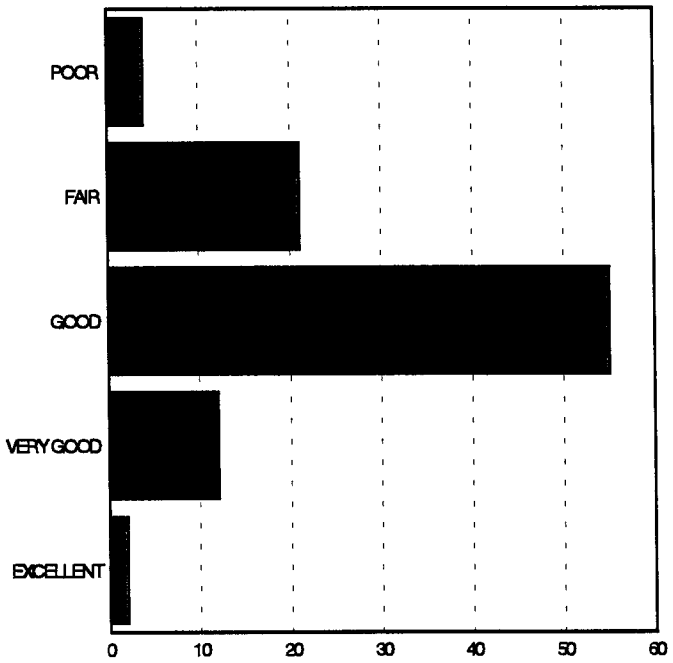


MEAN = 3.763

SD = .774

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 2.862

SD = .770

t = 8.06

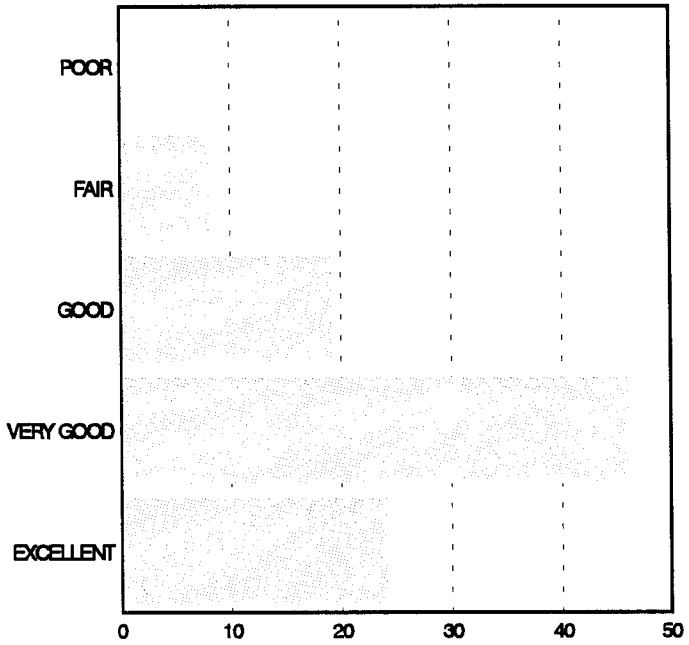
*Five point scale ratings ranged from 1 = poor to 5 = excellent, p< .001 with 189 degrees of freedom.

TECHNICAL QUALITY QUESTION #13

THOROUGHNESS OF EXAMINATIONS AND ACCURACY OF DIAGNOSES

FAMILY PRACTICE

TOTAL RESPONDENTS 97

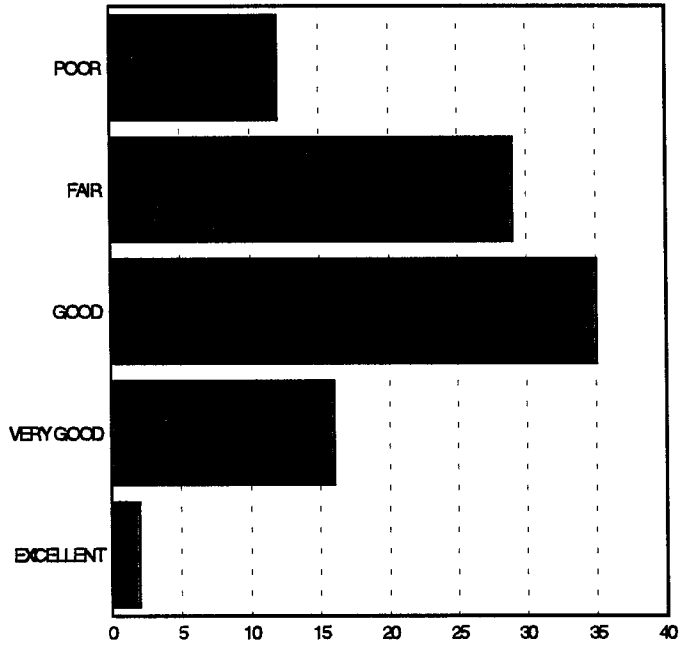


MEAN = 3.887

SD = .887

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 2.649

SD = .981

t = 9.20

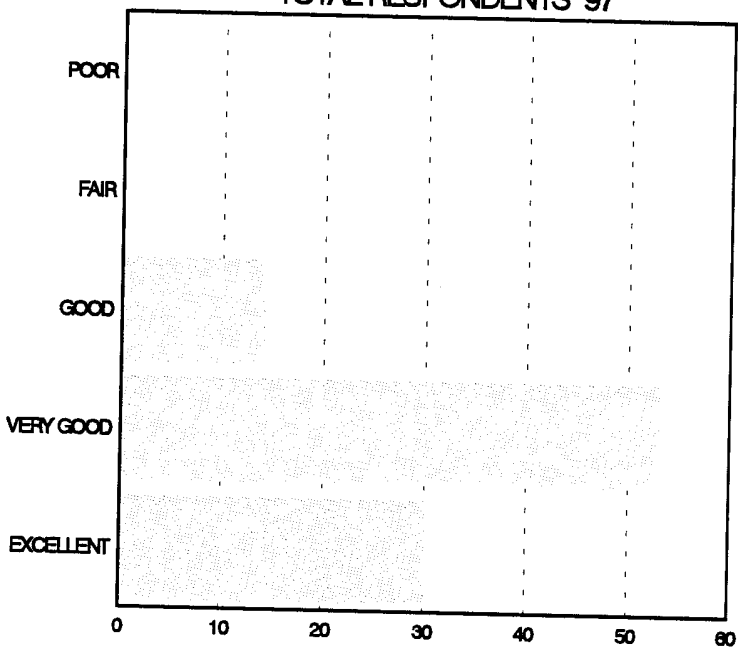
*Five point scale ratings ranged from 1 = poor to 5 = excellent, $p < .001$ with 189 degrees of freedom.

TECHNICAL QUALITY QUESTION #14

SKILLS, EXPERIENCE, AND TRAINING OF DOCTORS

FAMILY PRACTICE

TOTAL RESPONDENTS 97

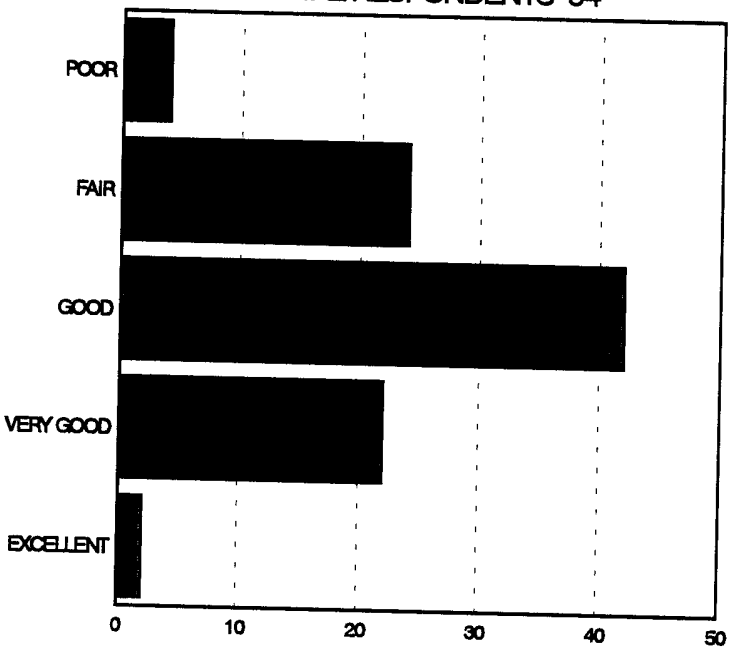


MEAN = 4.165

SD = .656

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 2.936

SD = .856

t = 11.08

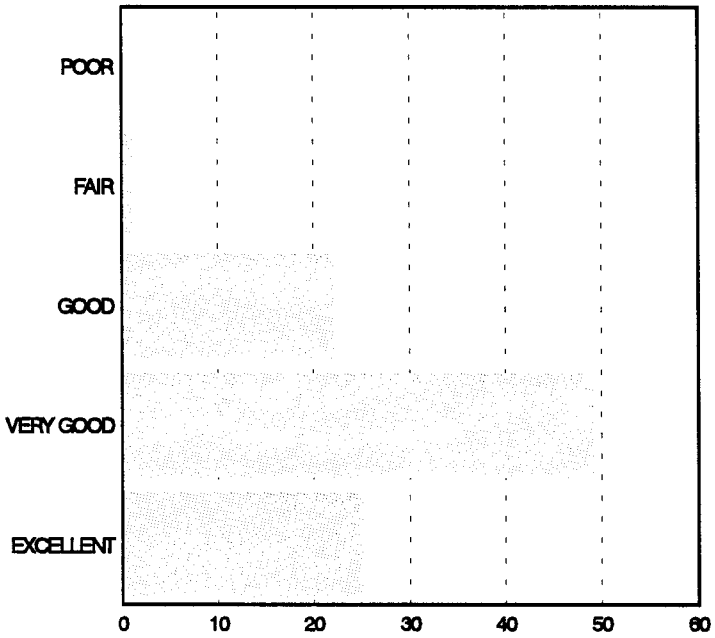
*Five point scale ratings ranged from 1 = poor to 5 = excellent, $p < .001$ with 189 degrees of freedom.

TECHNICAL QUALITY QUESTION #15

THOROUGHNESS OF TREATMENT

FAMILY PRACTICE

TOTAL RESPONDENTS 97

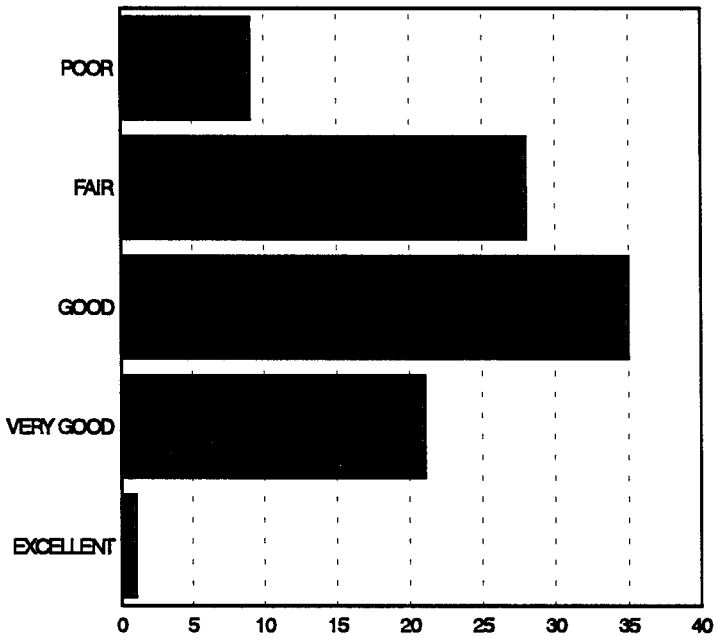


MEAN = 4.010

SD = .729

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 2.755

SD = .947

t = 10.28

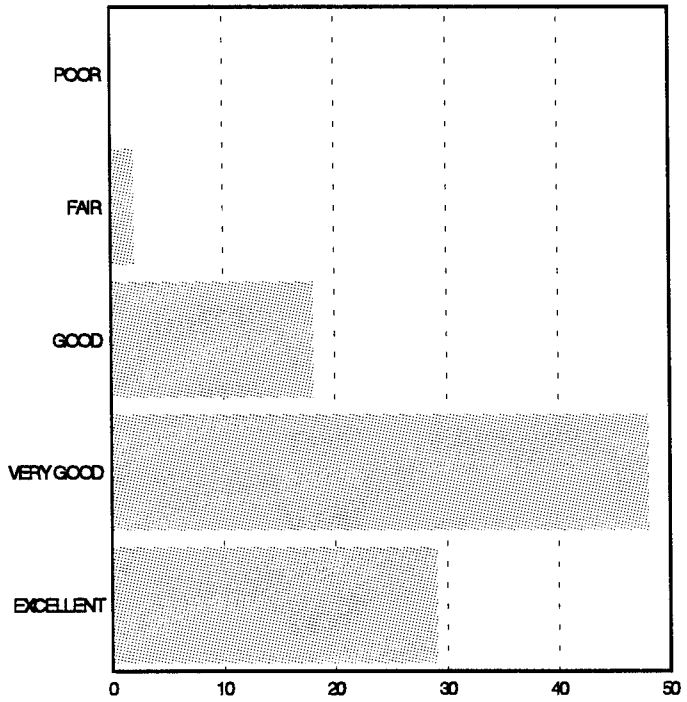
*Five point scale ratings ranged from 1 = poor to 5 = excellent, p< .001 with 189 degrees of freedom.

COMMUNICATION QUESTION #16

EXPLANATIONS OF MEDICAL PROCEDURES AND TEST

FAMILY PRACTICE

TOTAL RESPONDENTS 97

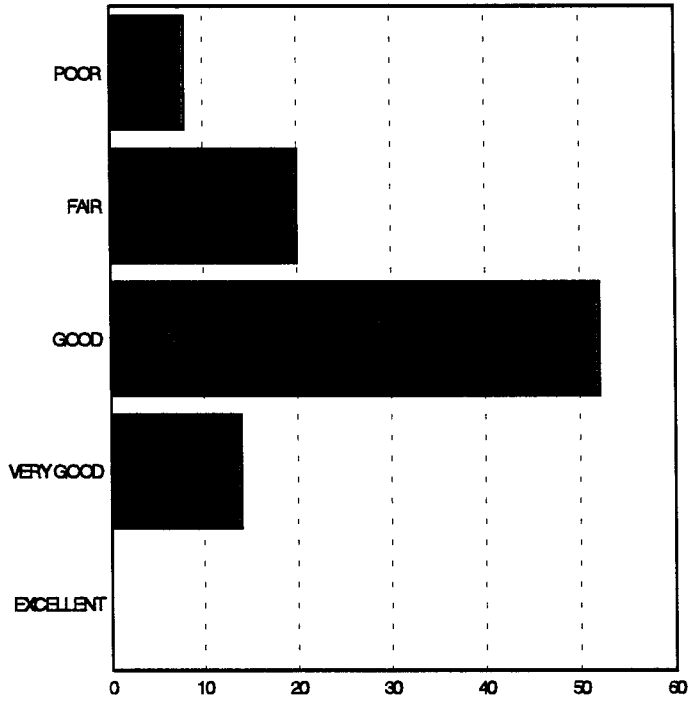


MEAN = 4.072

SD = .753

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 2.766

SD = .809

t = 11.55

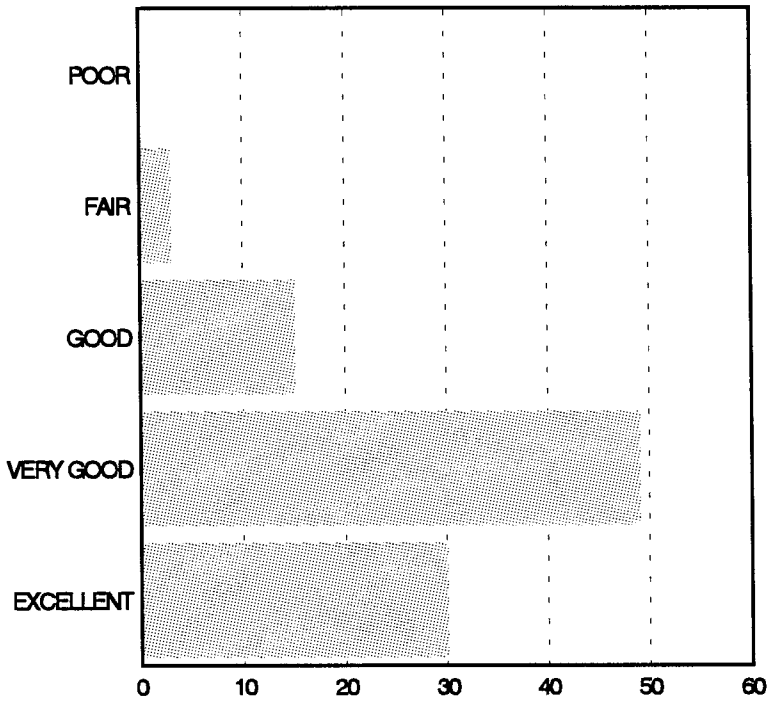
*Five point scale ratings ranged from 1 = poor to 5 = excellent, $p < .001$ with 189 degrees of freedom.

COMMUNICATION QUESTION #17

ATTENTION GIVEN TO WHAT YOU HAVE TO SAY

FAMILY PRACTICE

TOTAL RESPONDENT 97

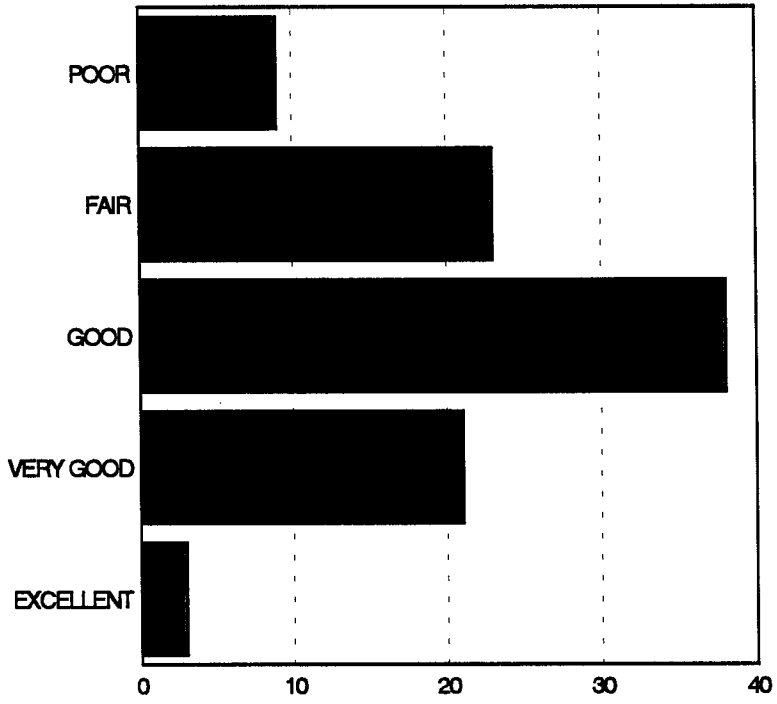


MEAN = 4.093

SD = .765

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 2.851

SD = .983

t = 9.76

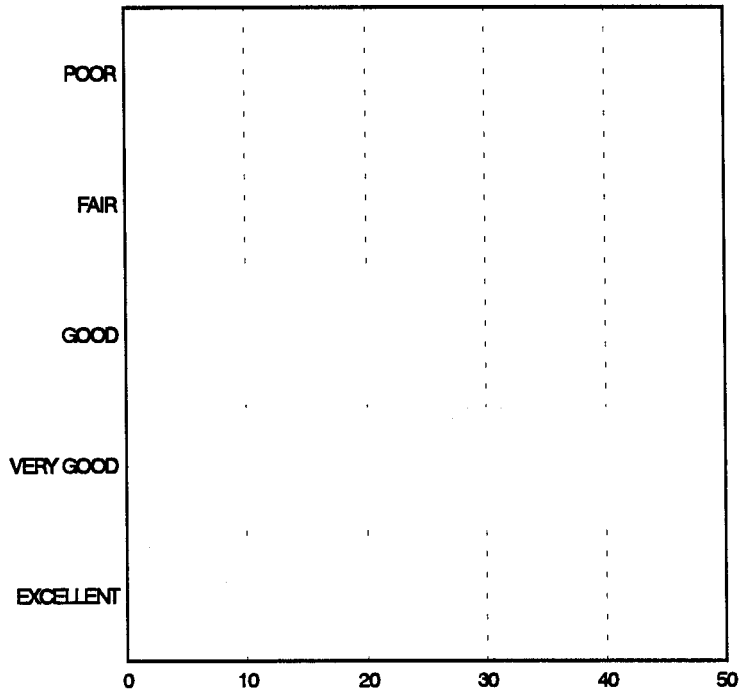
*Five point scale ratings ranged from 1 = poor to 5 = excellent, p< .001 with 189 degrees of freedom.

COMMUNICATION QUESTION #18

ADVICE YOU GET ABOUT WAYS TO AVOID ILLNESS AND STAY HEALTHY

FAMILY PRACTICE

TOTAL RESPONDENTS 97

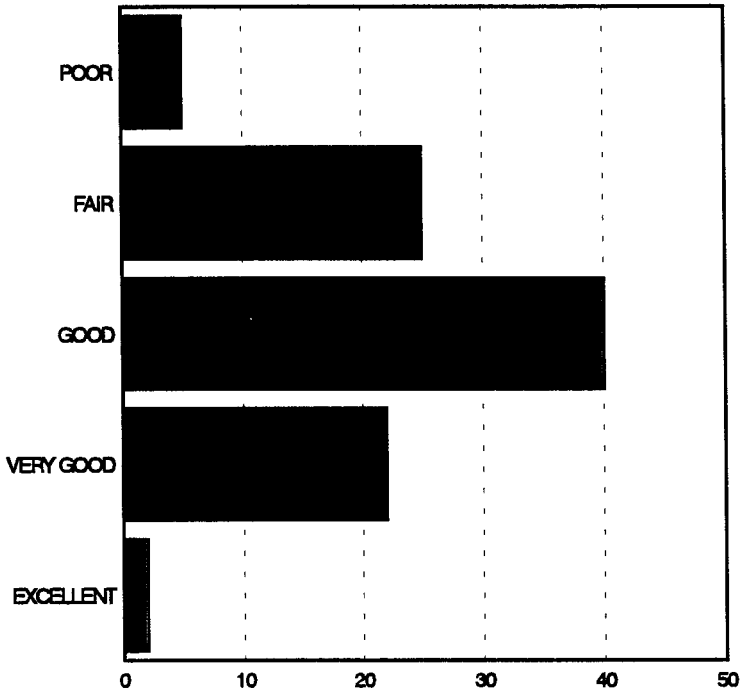


MEAN = 3.967

SD = .859

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 2.904

SD = .893

t = 8.40

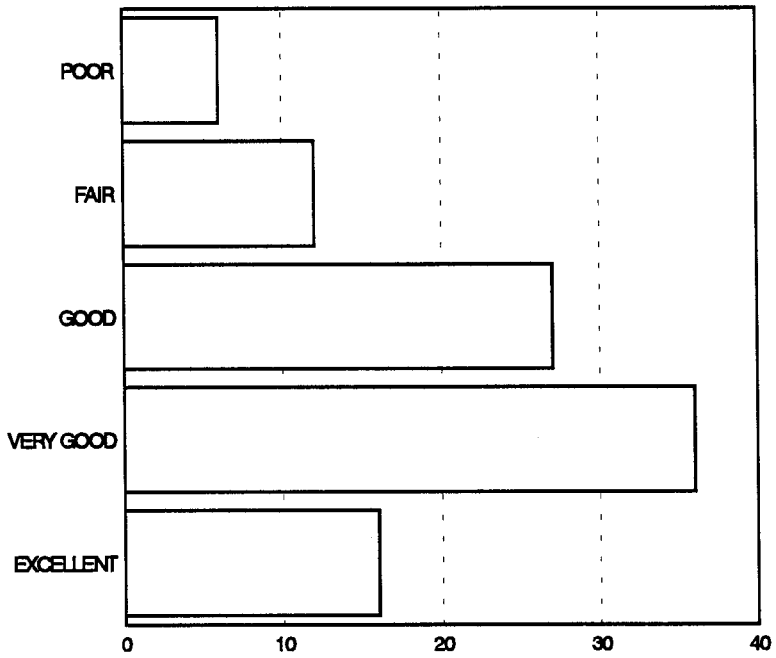
* Five point scale ratings ranged from 1 = poor to 5 = excellent, $p < .001$ with 189 degrees of freedom.

CHOICE & CONTINUITY QUESTION #19

ARRANGEMENTS FOR CHOOSING A PERSONAL PHYSICIAN

FAMILY PRACTICE

TOTAL RESPONDENTS 97

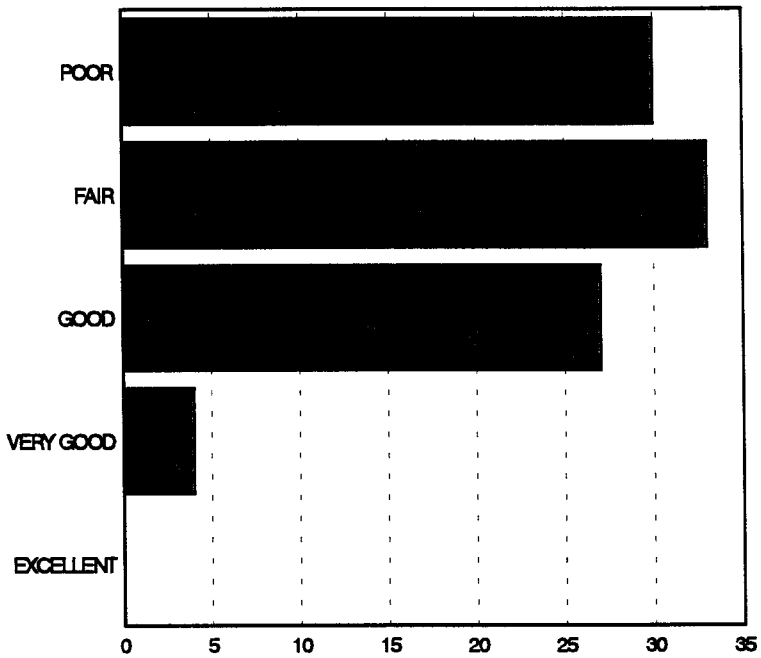


MEAN = 3.453

SD = 1.099

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 2.053

SD = .884

t = 9.68

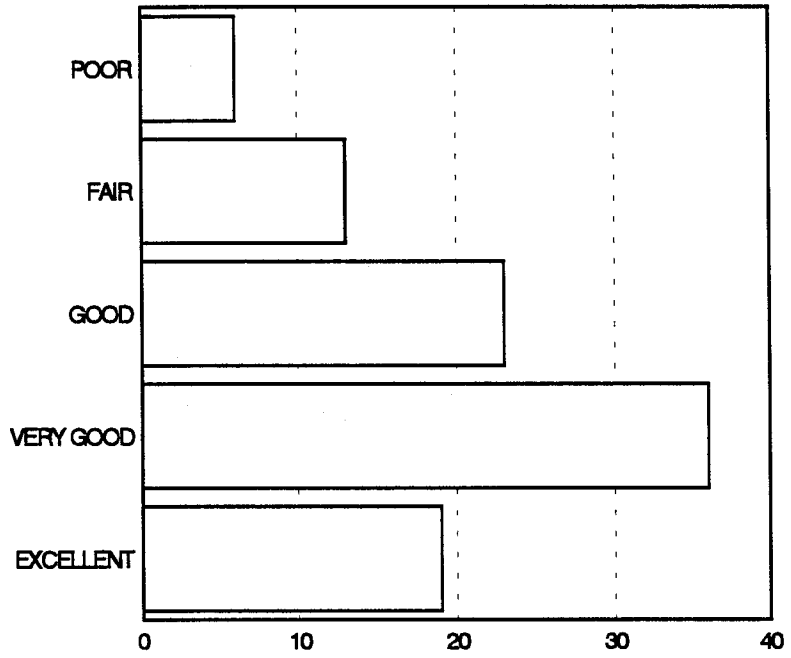
*Five point scale ratings ranged from 1 = poor to 5 = excellent, $p < .001$ with 189 degrees of freedom.

CHOICE & CONTINUITY QUESTION #20

EASE OF SEEING THE DOCTOR OF YOUR CHOICE

FAMILY PRACTICE

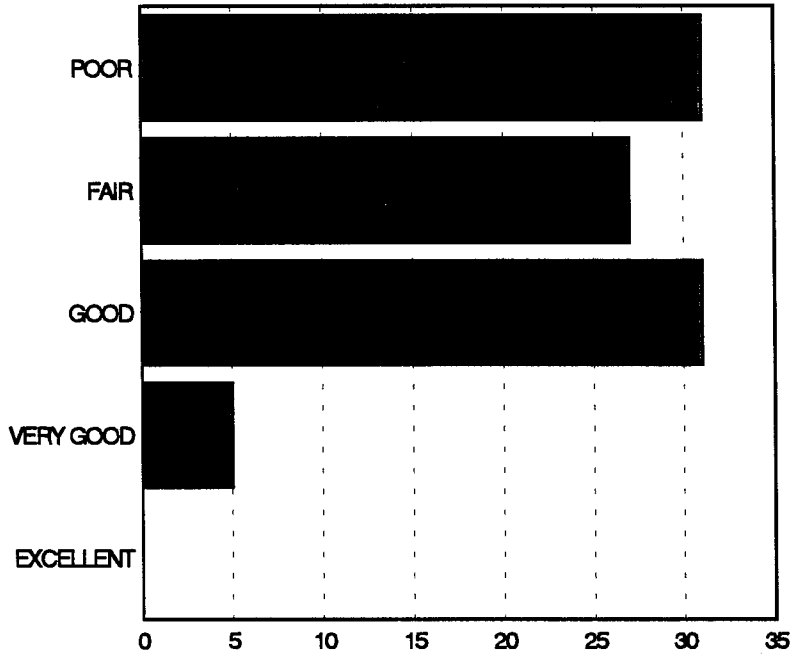
TOTAL RESPONDENTS 97



MEAN = 3.505
SD = 1.138

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 2.106
SD = .933

t = 9.28

85

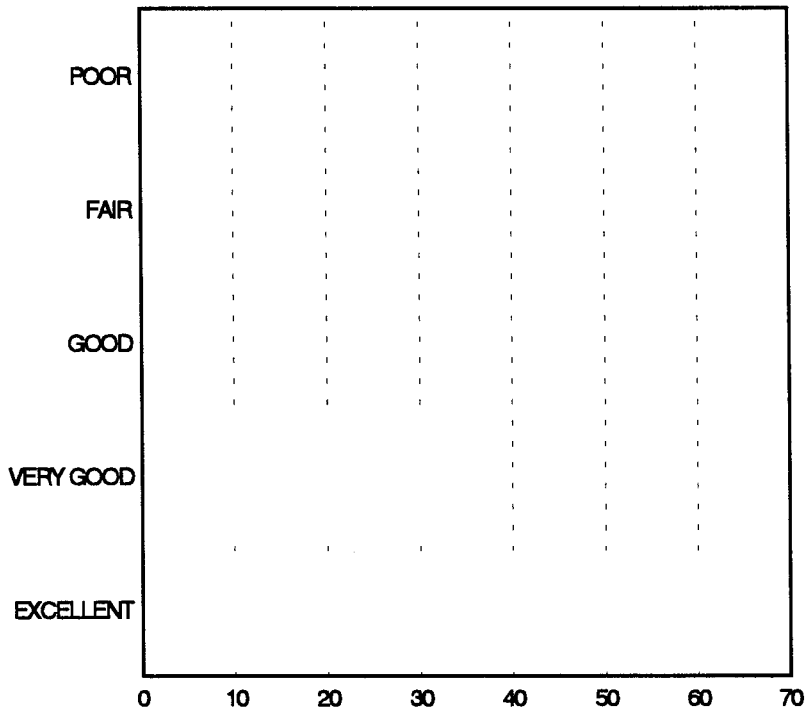
*Five point scale ratings ranged from 1 = poor to 5 = excellent, $p < .001$ with 189 degrees of freedom.

INTERPERSONAL CARE QUESTION #21

FRIENDLINESS AND COURTESY SHOWN TO YOU BY DOCTORS

FAMILY PRACTICE

TOTAL RESPONDENTS 97

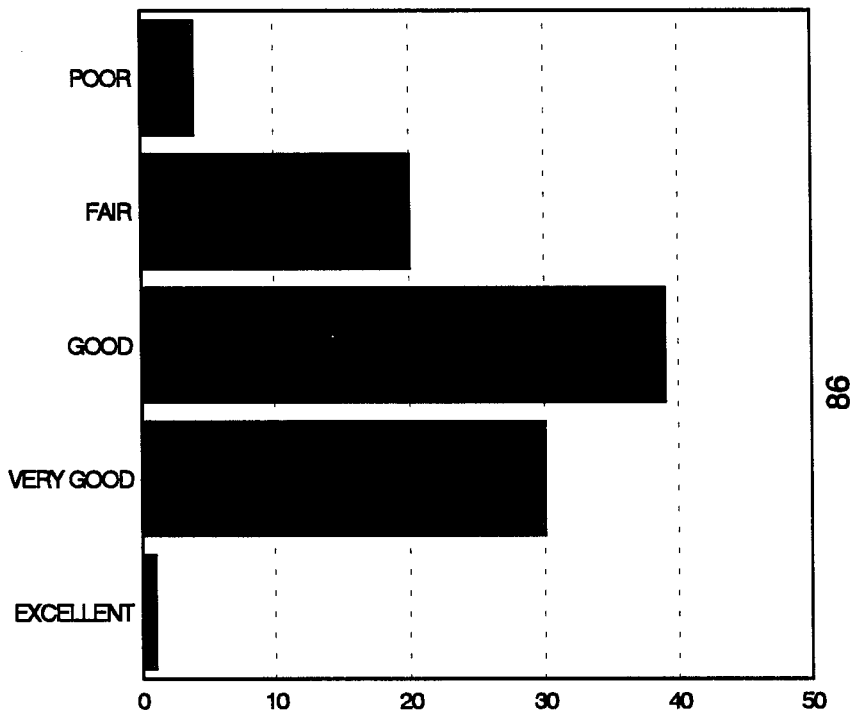


MEAN = 4.58

SD = .592

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 3.043

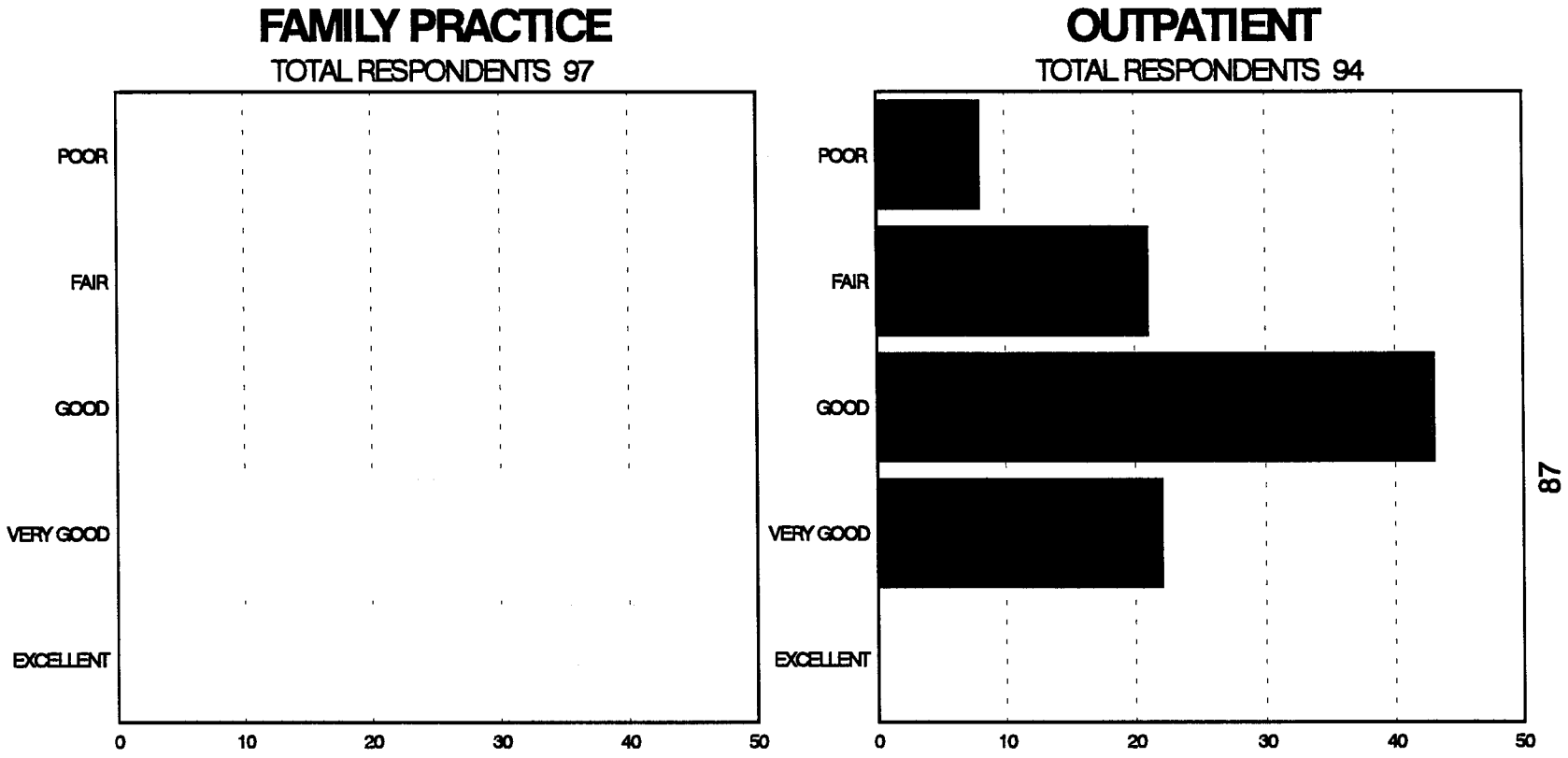
SD = .867

t = 14.33

*Five point scale ratings ranged from 1 = poor to 5 = excellent, p< .001 with 189 degrees of freedom.

INTERPERSONAL CARE QUESTION #22

PERSONAL INTEREST IN YOU AND YOUR MEDICAL PROBLEMS



t = 13.57

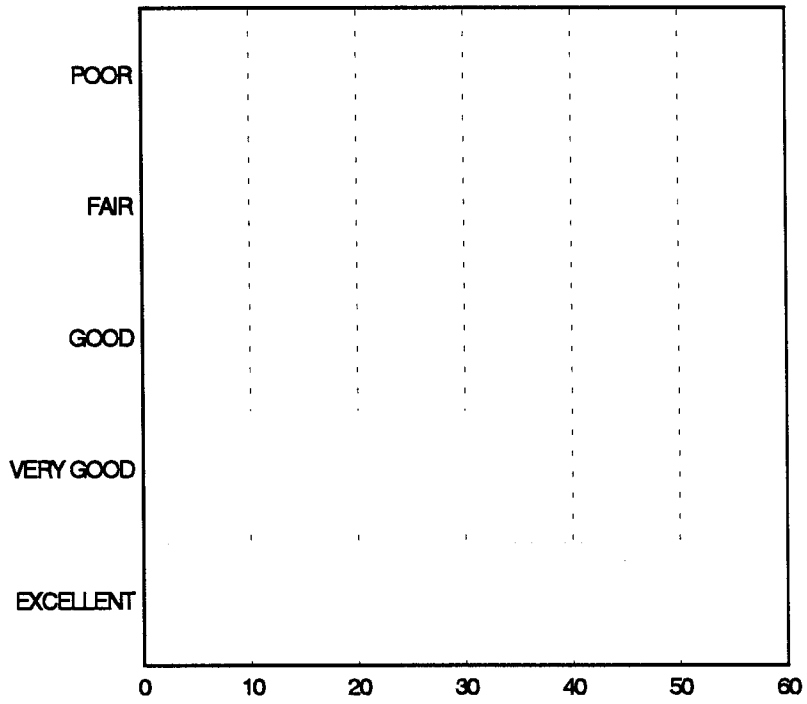
*Five point scale ratings ranged from 1 = poor to 5 = excellent, $p < .001$ with 189 degrees of freedom.

INTERPERSONAL CARE QUESTION #23

RESPECT SHOWN TO YOU, ATTENTION TO YOUR PRIVACY

FAMILY PRACTICE

TOTAL RESPONDENTS 97

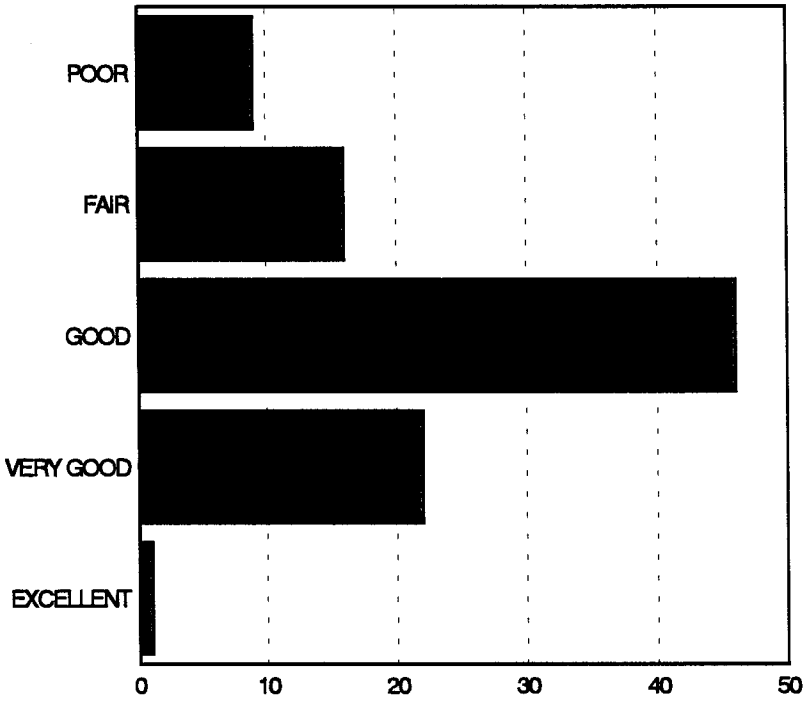


MEAN = 4.443

SD = .645

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 2.904

SD = .910

t = 13.62

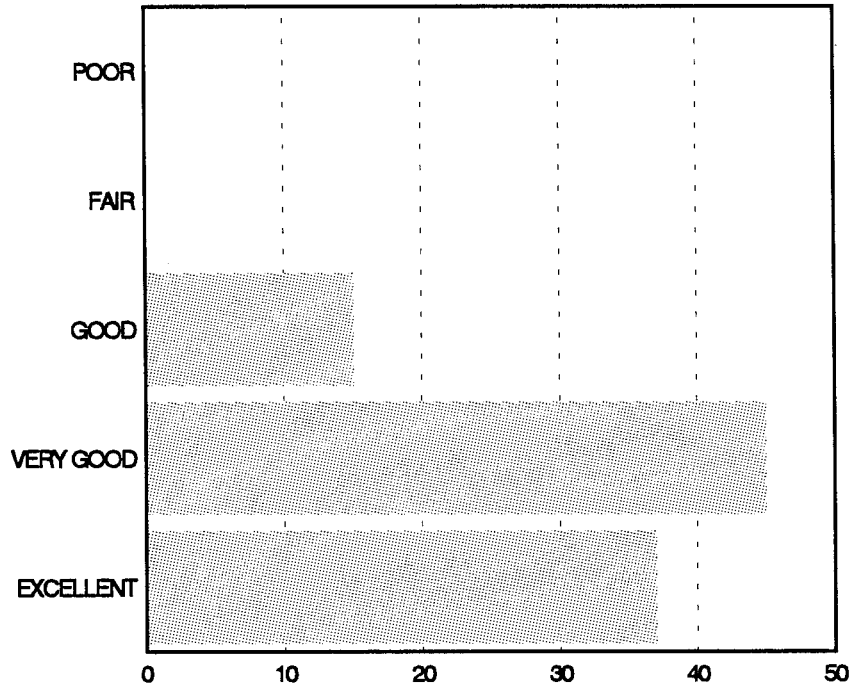
*Five point scale ratings ranged from 1 = poor to 5 = excellent, p< .001 with 189 degrees of freedom.

INTERPERSONAL CARE QUESTION #24

REASSURANCE AND SUPPORT OFFERED TO YOU BY DOCTORS AND STAFF

FAMILY PRACTICE

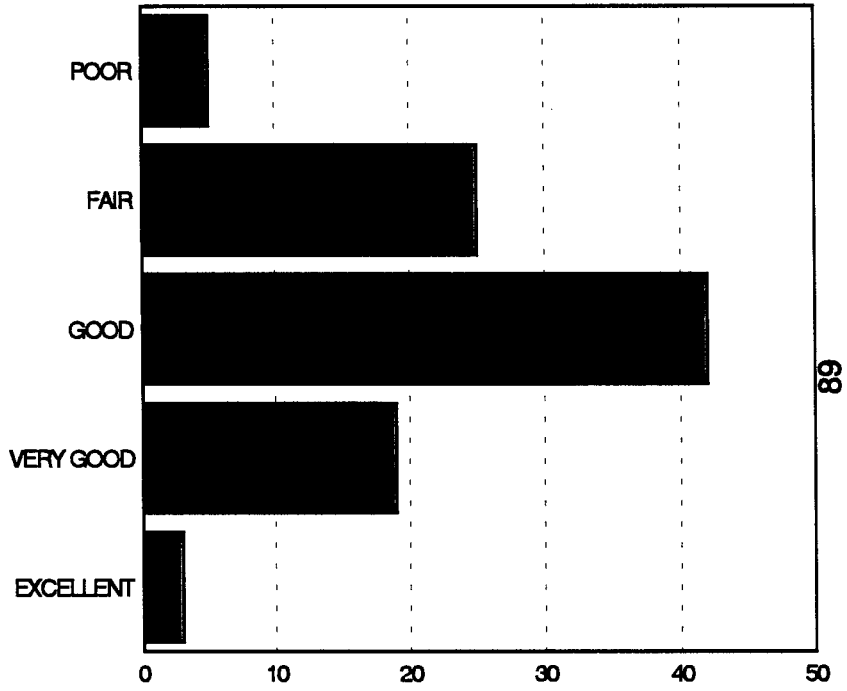
TOTAL RESPONDENTS 97



MEAN = 4.443
SD = .645

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 2.894
SD = .910

t = 13.62

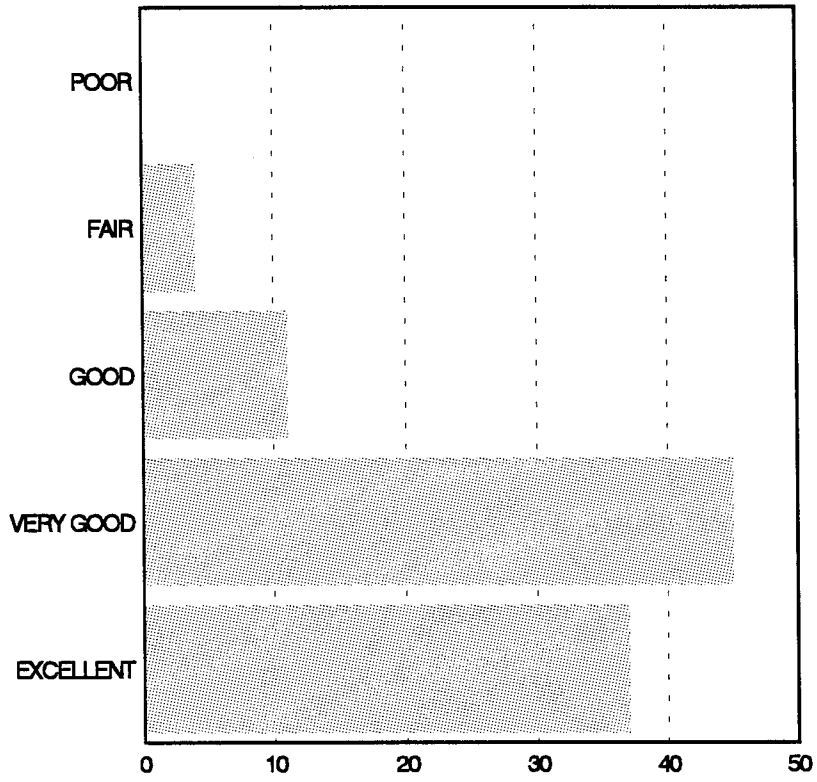
*Five point scale ratings ranged from 1 = poor to 5 = excellent, $p < .001$ with 189 degrees of freedom.

INTERPERSONAL CARE QUESTION #25

FRIENDLINESS AND COURTESY SHOWN TO YOU BY STAFF

FAMILY PRACTICE

TOTAL RESPONDENTS 97

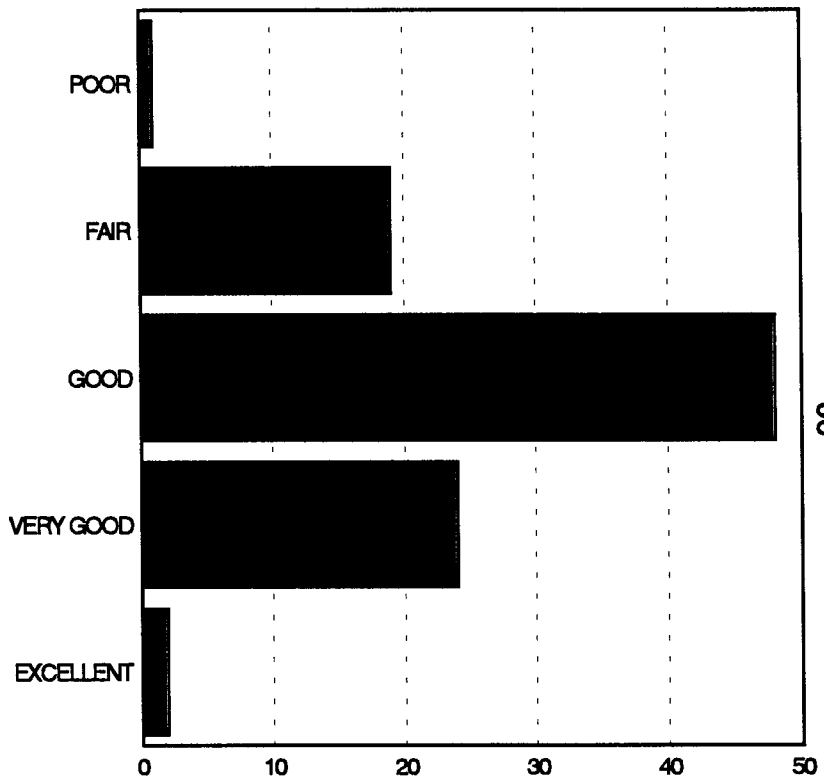


MEAN = 4.186

SD = .795

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 3.075

SD = .765

t = 9.84

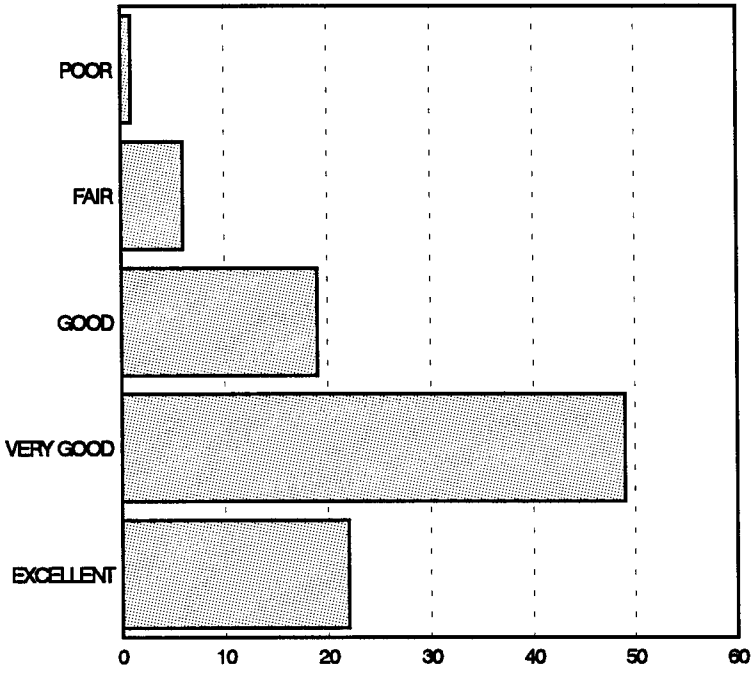
*Five point scale ratings ranged from 1 = poor to 5 = excellent, p< .001 with 189 degrees of freedom.

INTERPERSONAL CARE QUESTION #26

AMOUNT OF TIME YOU HAVE WITH DOCTORS AND STAFF DURING A VISIT

FAMILY PRACTICE

TOTAL RESPONDENTS 97

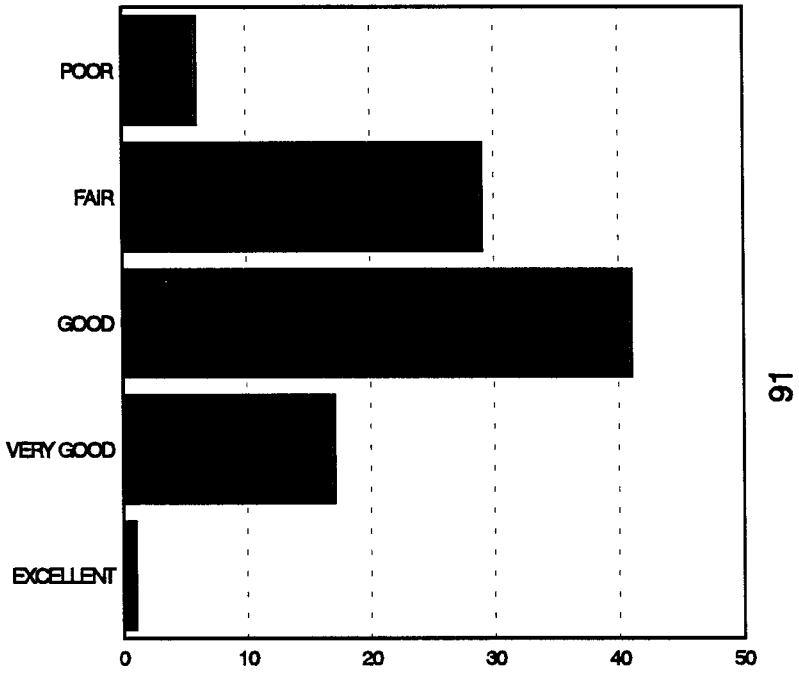


MEAN = 3.876

SD = .869

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 2.766

SD = .860

t = 8.87

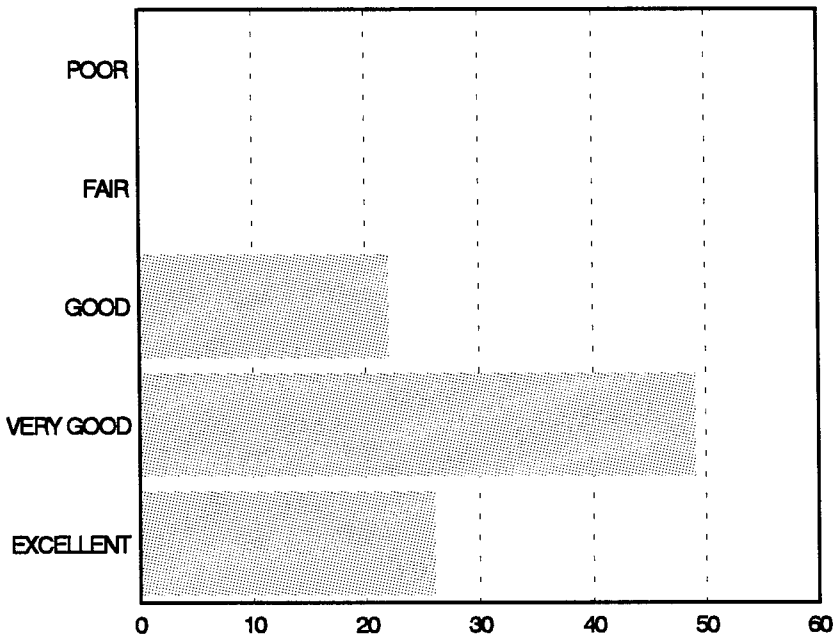
*Five point scale ratings ranged from 1 = poor to 5 = excellent, p< .001 with 189 degrees of freedom.

OUTCOMES QUESTION #27

THE OUTCOME OF YOUR MEDICAL CARE, HOW MUCH YOU ARE HELPED

FAMILY PRACTICE

TOTAL RESPONDENTS 97

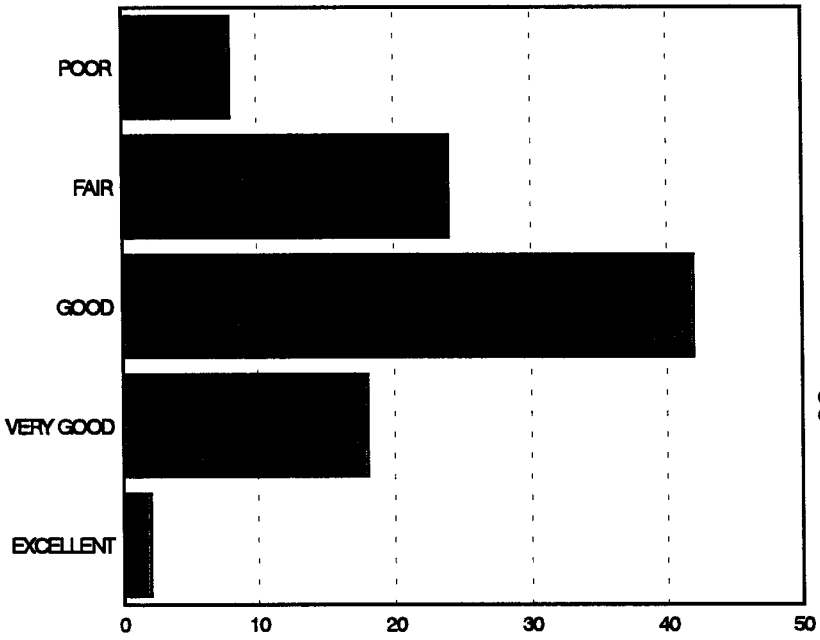


MEAN = 4.041

SD = .076

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 2.809

SD = .919

92

t =10.42

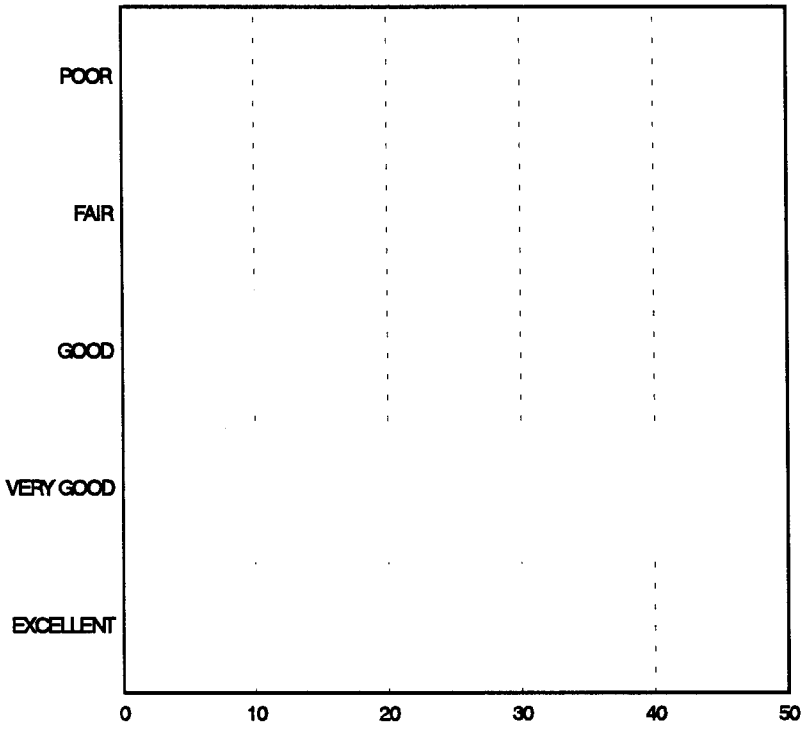
*Five point scale ratings ranged from 1 = poor to 5 = excellent, p< .001 with 189 degrees of freedom.

OUTCOMES QUESTION #28

OVERALL QUALITY OF CARE AND SERVICE

FAMILY PRACTICE

TOTAL RESPONDENTS 97

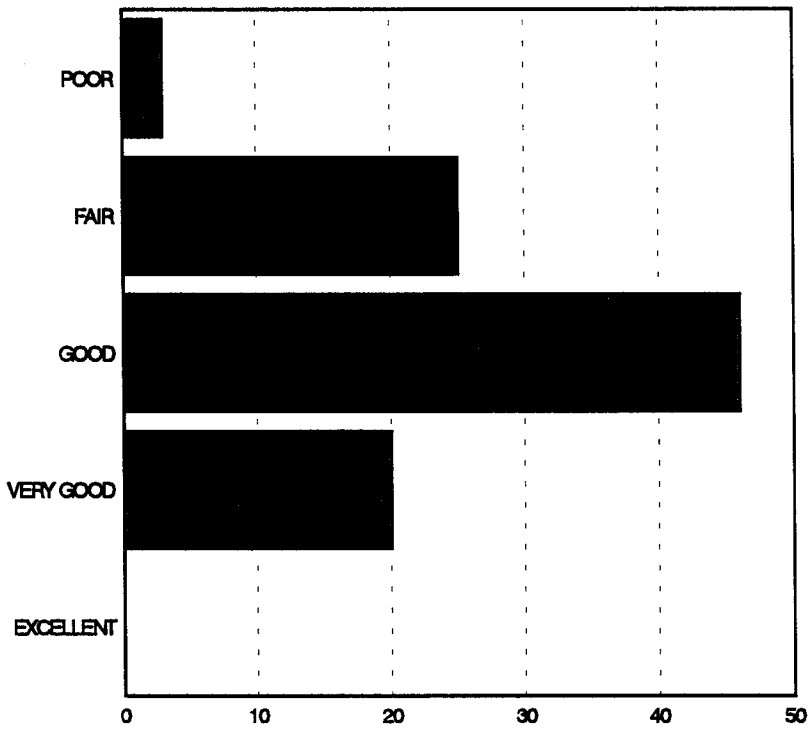


MEAN = 4.165

SD = .717

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 2.883

SD = .774

t = 11.88

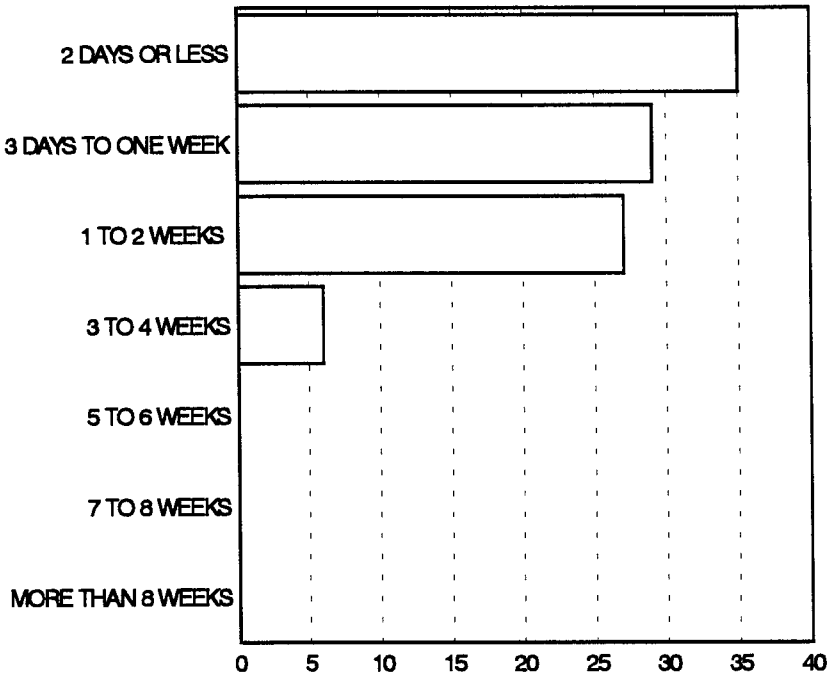
*Five point scale ratings ranged from 1 = poor to 5 = excellent, p< .001 with 189 degrees of freedom.

TIMELINESS QUESTION #29

HOW LONG DO YOU USUALLY HAVE TO WAIT BETWEEN THE TIME YOU MAKE AN APPOINTMENT FOR CARE AND THE DAY YOU ACTUALLY SEE A PHYSICIAN?

FAMILY PRACTICE

TOTAL RESPONDENTS 97

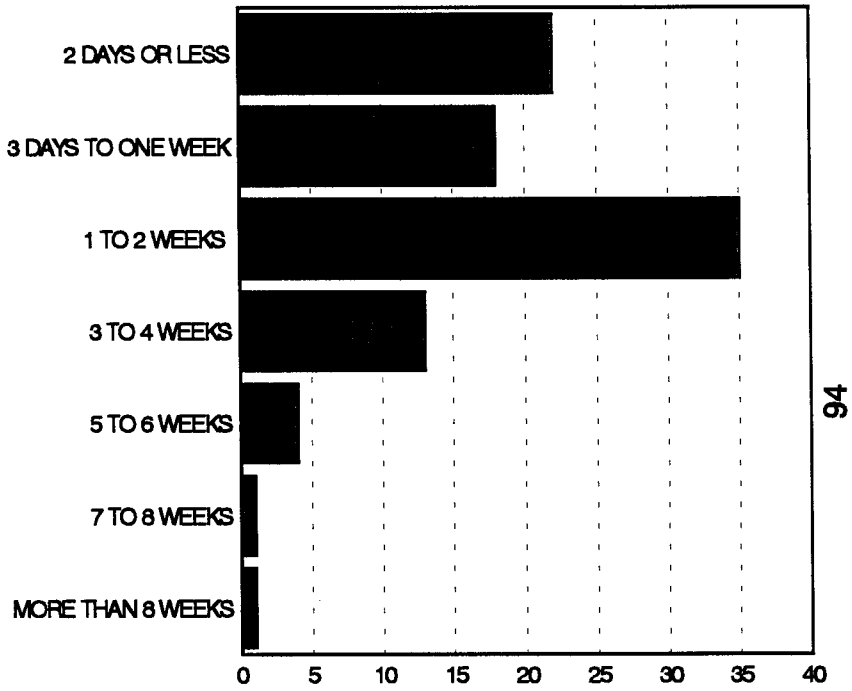


MEAN = 2.041

SD = .946

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 2.638

SD = 1.260

t = -3.71

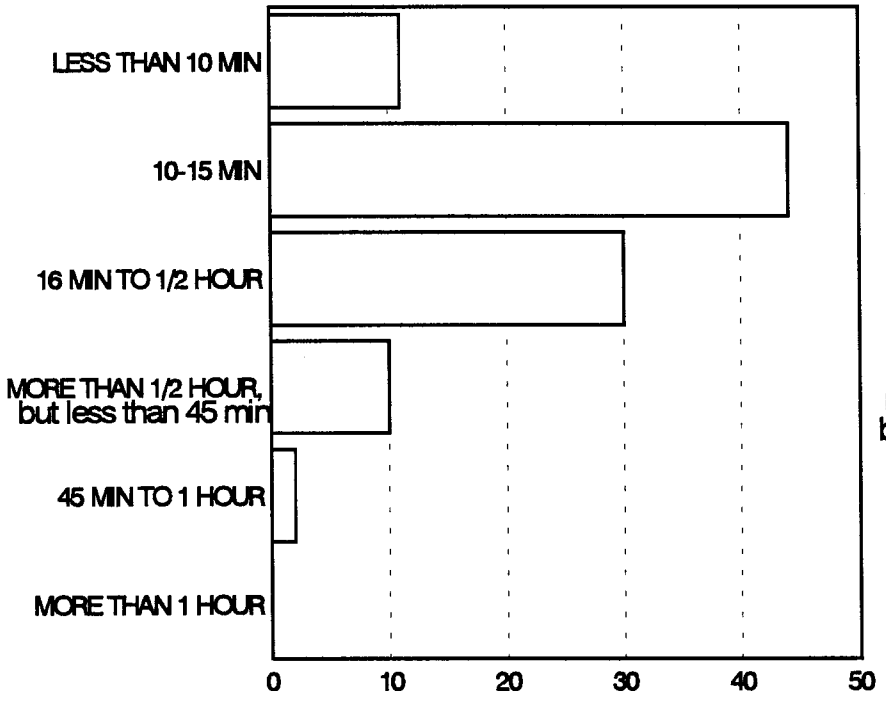
*Seven point scale ratings ranged from 1 = 2 days or less to 7 = more than 8 weeks, p < .001 with 189 degrees of freedom.

TIMELINESS QUESTION #30

ONCE YOU GET TO YOUR PROVIDER'S OFFICE, HOW LONG DO YOU USUALLY HAVE TOO WAIT TO SEE YOUR PROVIDER WHEN YOU HAVE AN APPOINTMENT FOR CARE?

FAMILY PRACTICE

TOTAL RESPONDENTS 97

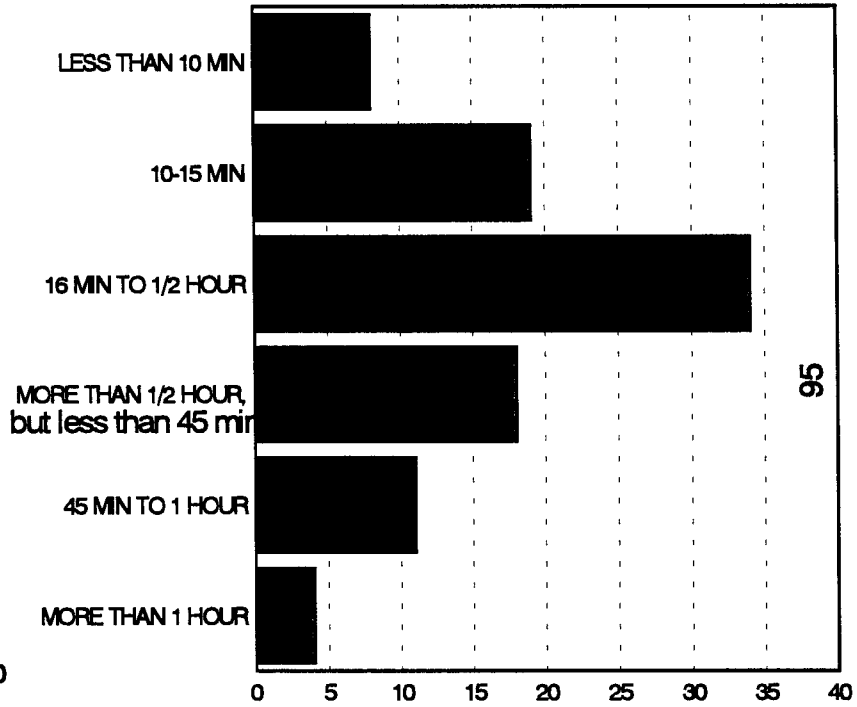


MEAN = 2.464

SD = .903

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 3.181

SD = 1.253

t = -4.55

*Six point scale ratings ranged from 1= less than 10 minutes to 6= more than 1 hour, p< .001 with 189 degrees of freedom.

APPENDIX V

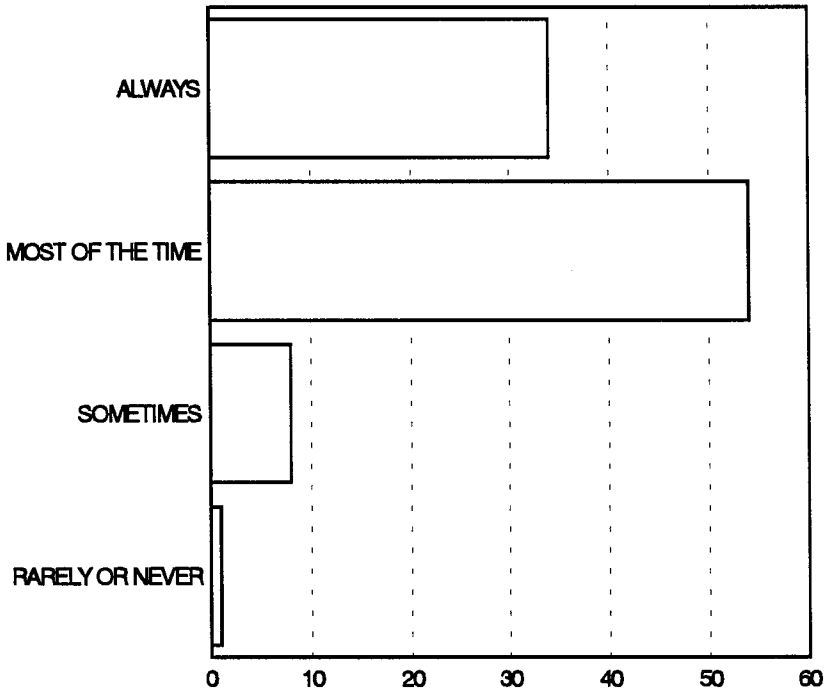
FREQUENCY DISTRIBUTION FOR DEMOGRAPHIC QUESTION

TIMELINESS QUESTION #31

WHEN YOU GO FOR MEDICAL CARE, HOW OFTEN DO YOU SEE THE SAME DOCTOR?

FAMILY PRACTICE

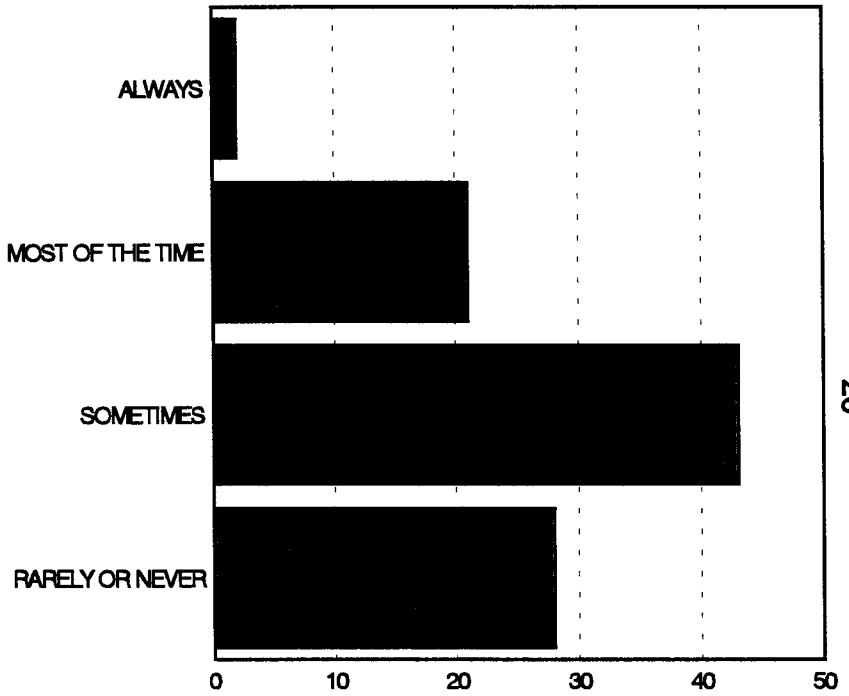
TOTAL RESPONDENTS 97



MEAN = 1.752
SD = .646

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 3.032
SD = .782

t = -12.34

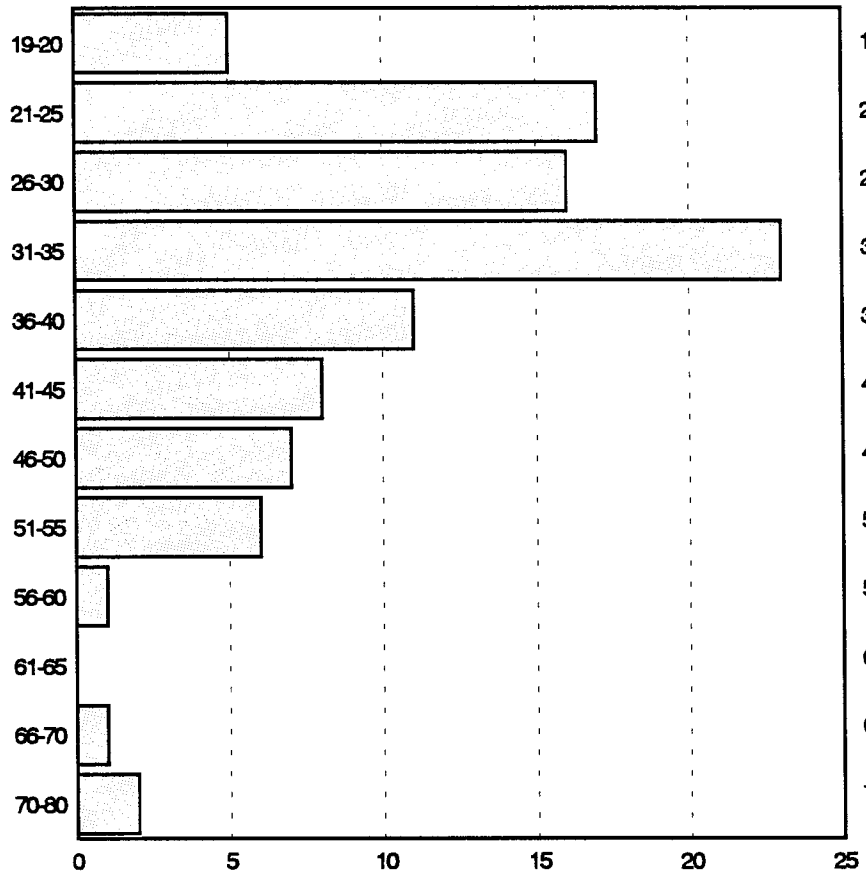
*Four point scale ratings ranged from 1 = always to 4 = rarely or never, $p < .001$ with 189 degrees of freedom.

AGE QUESTION #32

HOW OLD WERE YOU ON YOUR LAST BIRTHDAY?

FAMILY PRACTICE

TOTAL RESPONDENTS 97

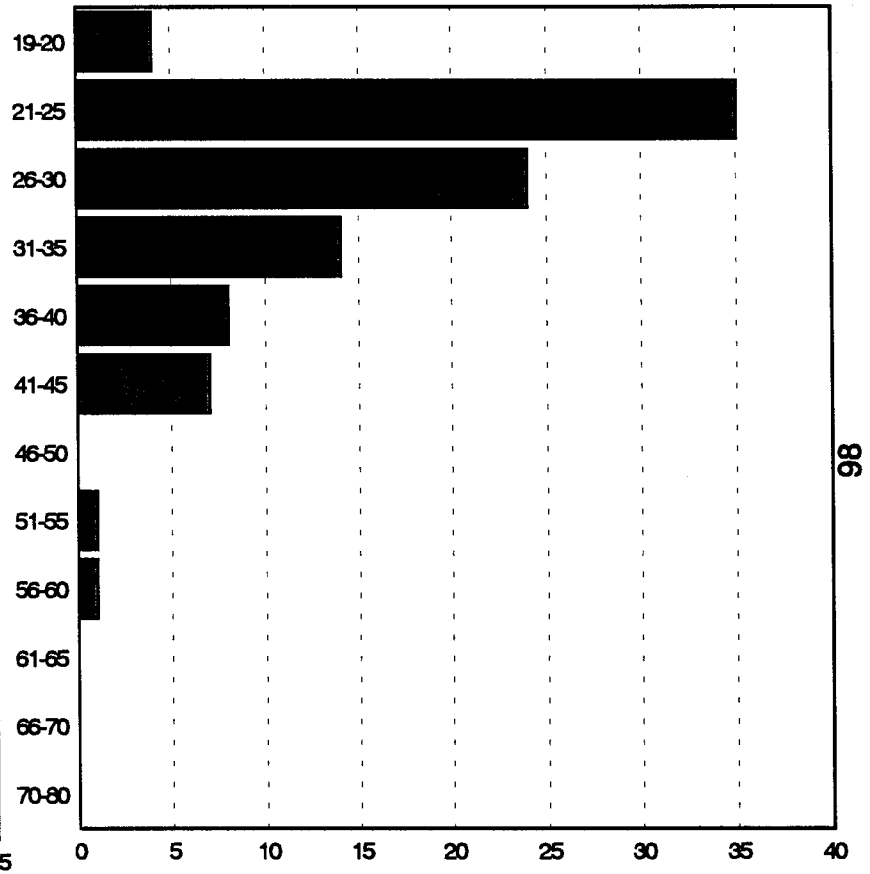


MEAN = 35.07

SD = 11.66

OUTPATIENT

TOTAL RESPONDENTS 94



MEAN = 29.08

SD = 7.77

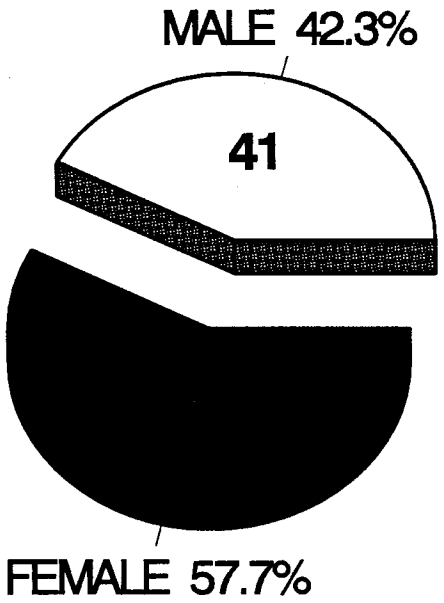
t = 4.16

*For presentation of the data, ages were compressed into groups.

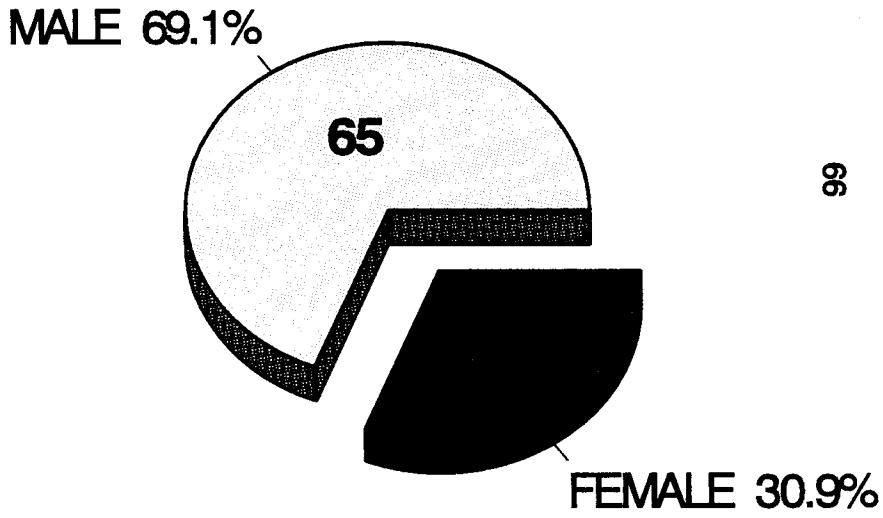
GENDER QUESTION #33

HOW OLD WERE YOU ON YOUR LAST BIRTHDAY?

FAMILY PRACTICE
TOTAL RESPONDENTS 97

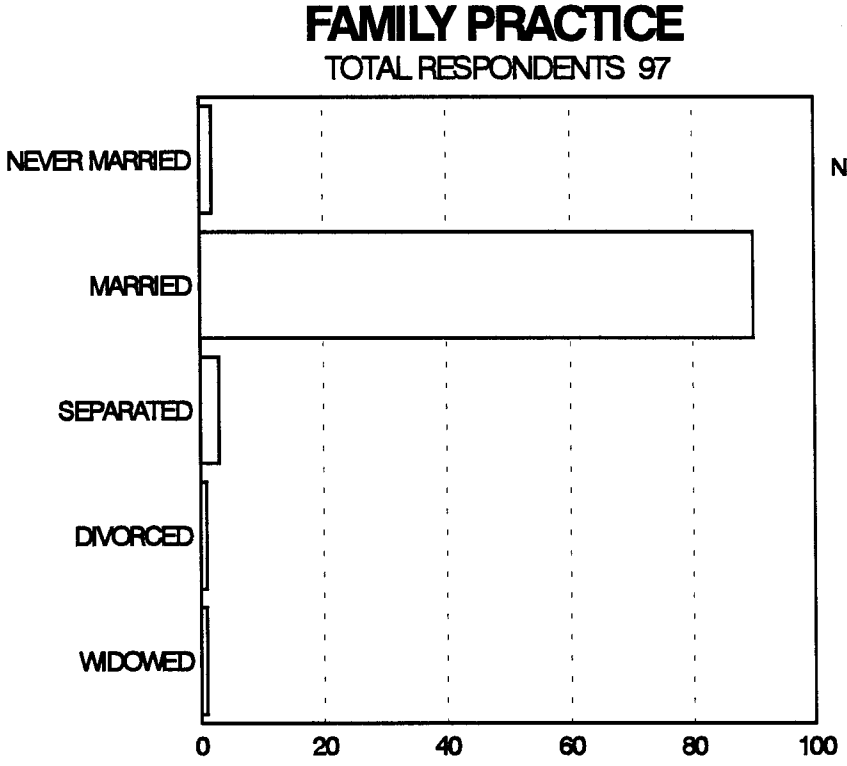


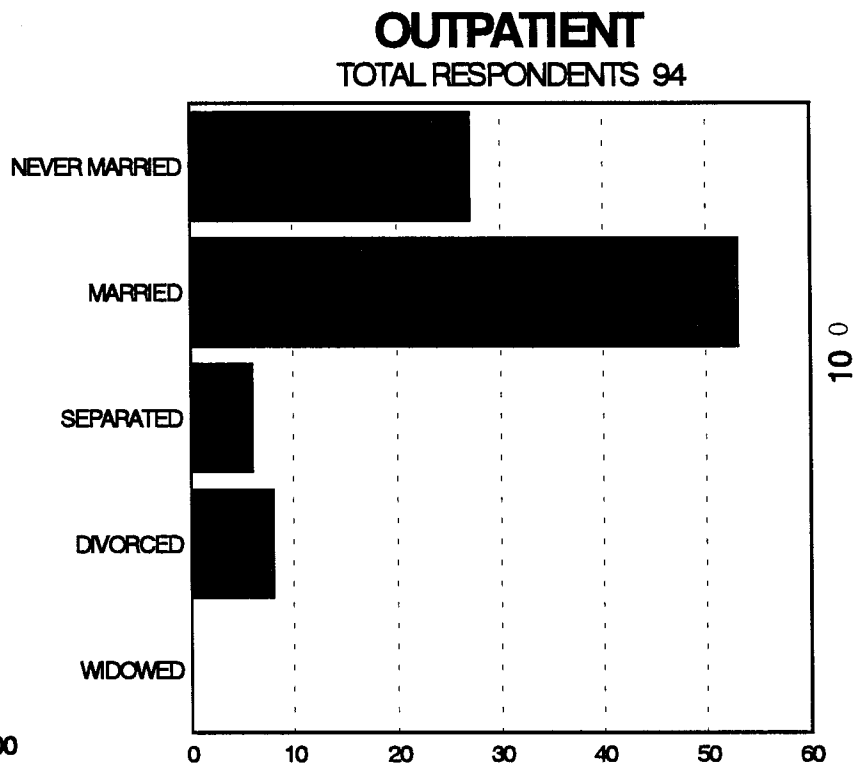
OUTPATIENT
TOTAL RESPONDENTS 94



MARTIAL STATUS QUESTION #34

WHICH OF THE FOLLOWING BEST DESCRIBES YOUR CURRENT MARTIAL STATUE?



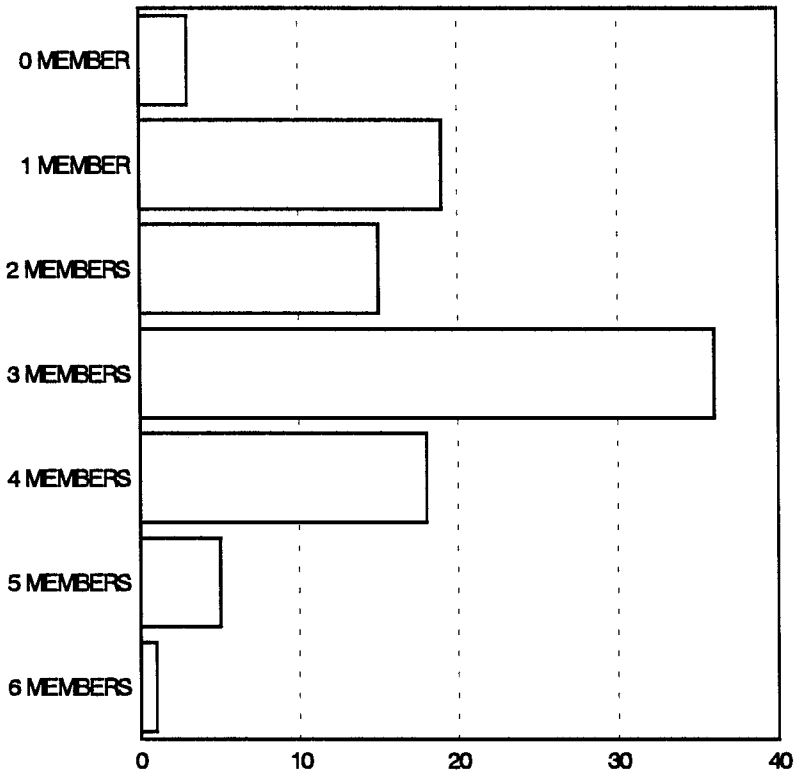


FAMILY MEMBERS QUESTION #35

HOW MANY FAMILY MEMBERS (NOT INCLUDING YOURSELF) ARE SEEN AT THIS HOSPITAL?

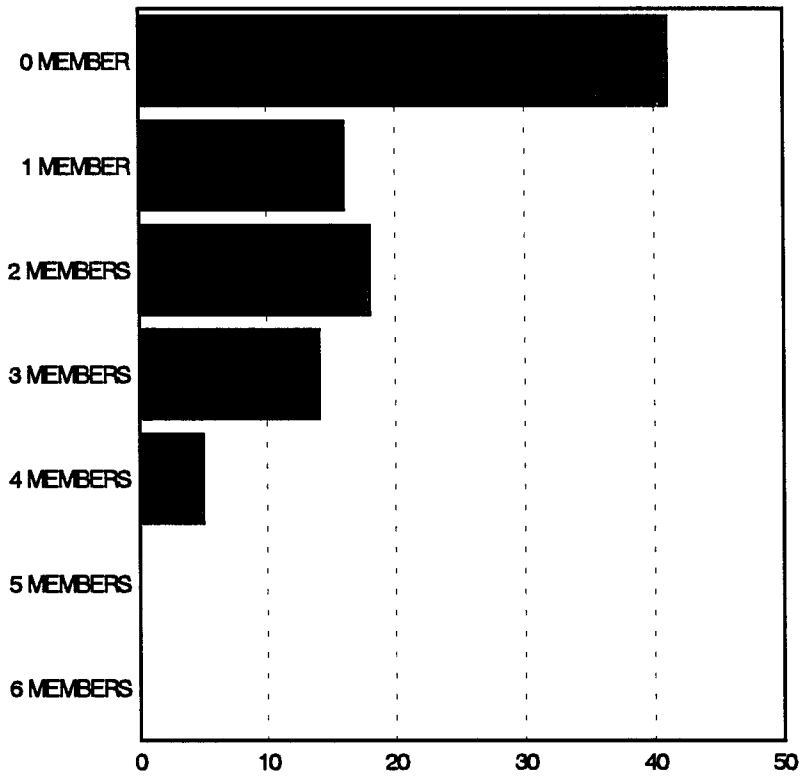
FAMILY PRACTICE

TOTAL RESPONDENTS 97



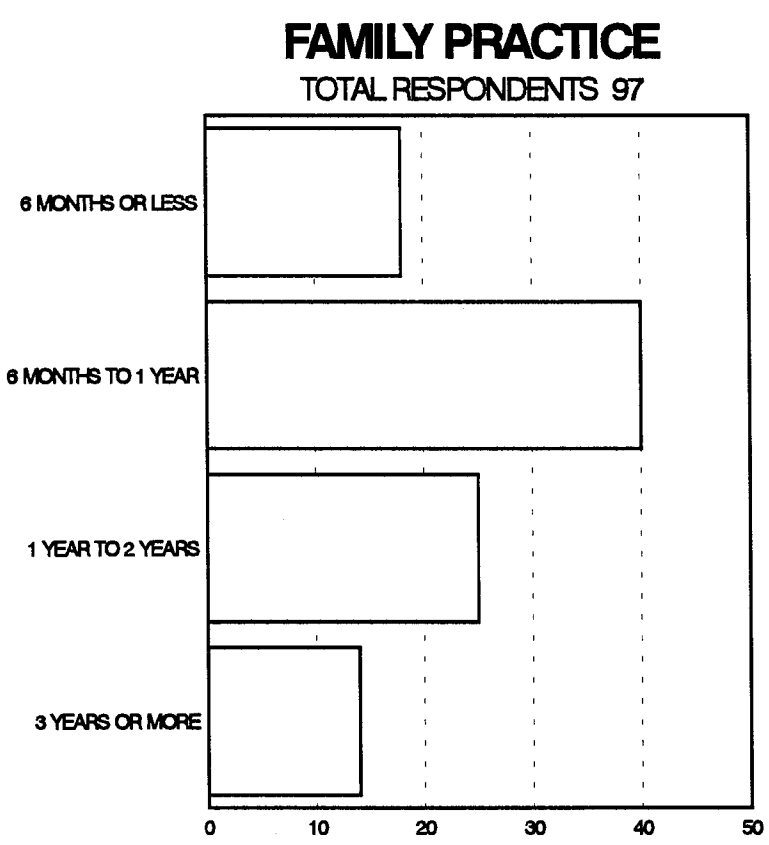
OUTPATIENT

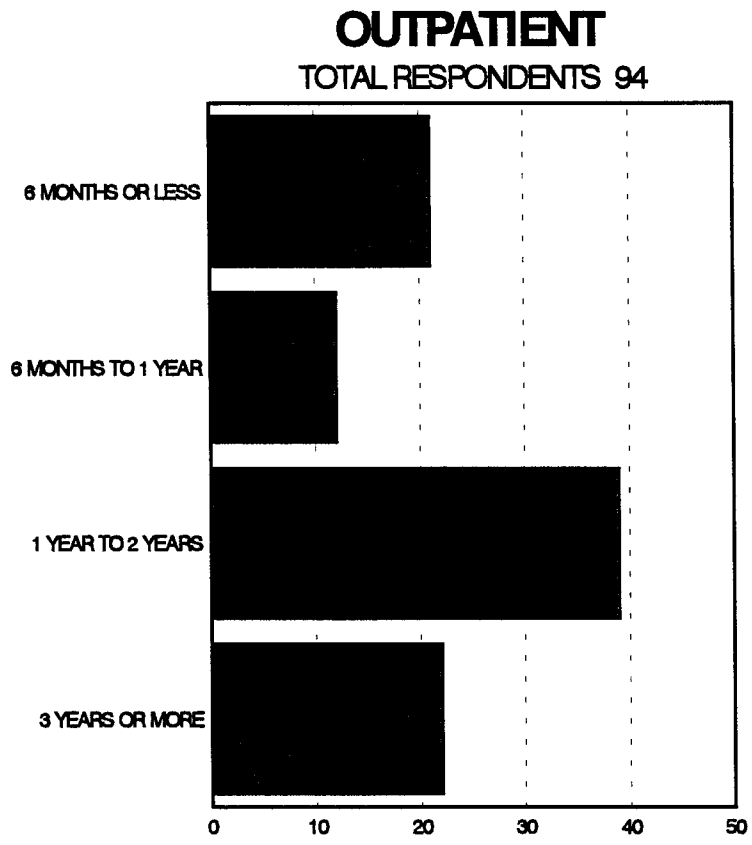
TOTAL RESPONDENTS 94



LENGTH OF CLINIC USE QUESTION #36

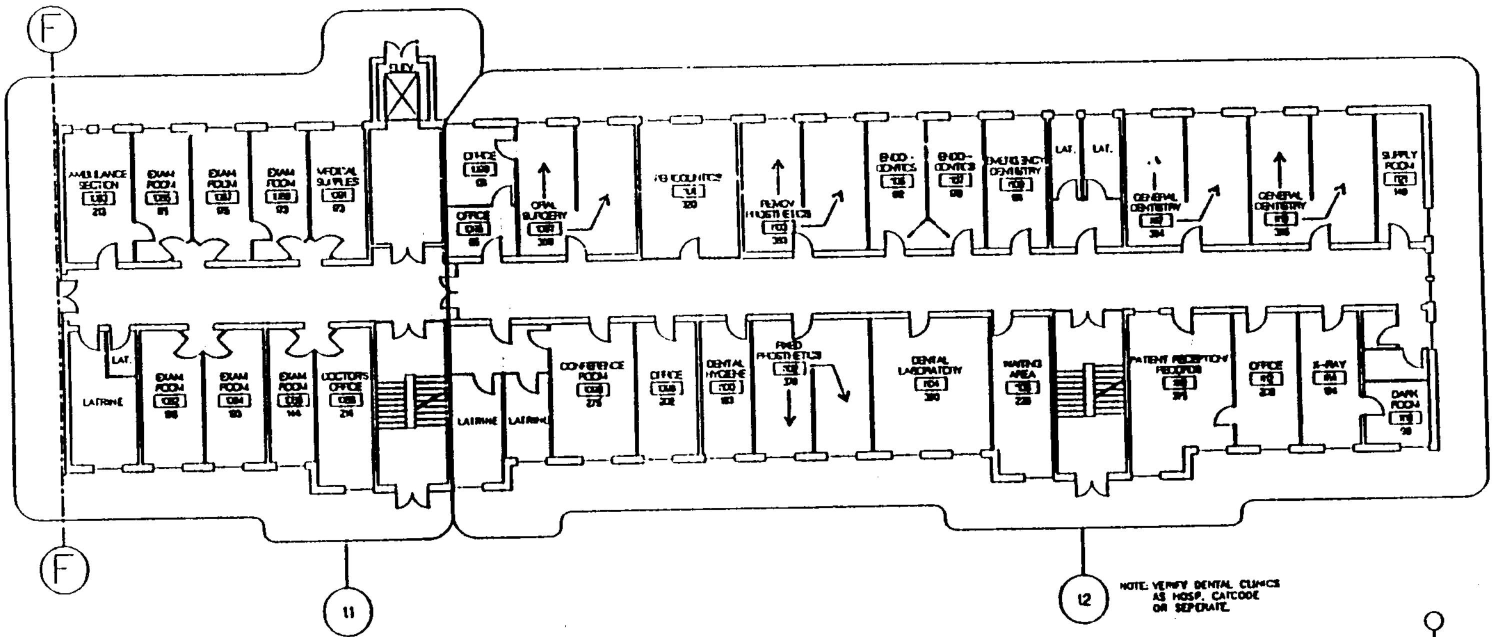
HOW LONG HAVE YOU USED THE FAMILY PRACTICE/OUTPATIENT CLINIC?

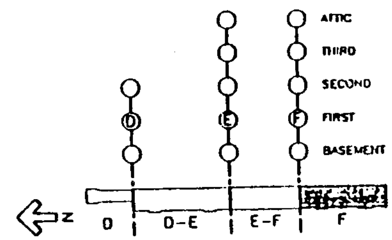




APPENDIX VI

PHYSICAL SPACE BLUEPRINTS





ROOM USE — OFFICE
ROOM ID — 123
AREA (NSF) — 456
CAPACITY — 2 PN
SPECIAL DOOR — SP

20 10 0 20 FEET

FLOOR ZONE TABLE

Gross: 38635	Net 23183	N/G Ratio: 0.600052			
Zone UIC	US Unit	Catcode Description	Gross	Net	Cap UM
1.1		51010 HOSPITAL	29856	17915	
1.2		54010 DENTAL CLINIC	8779	5268	

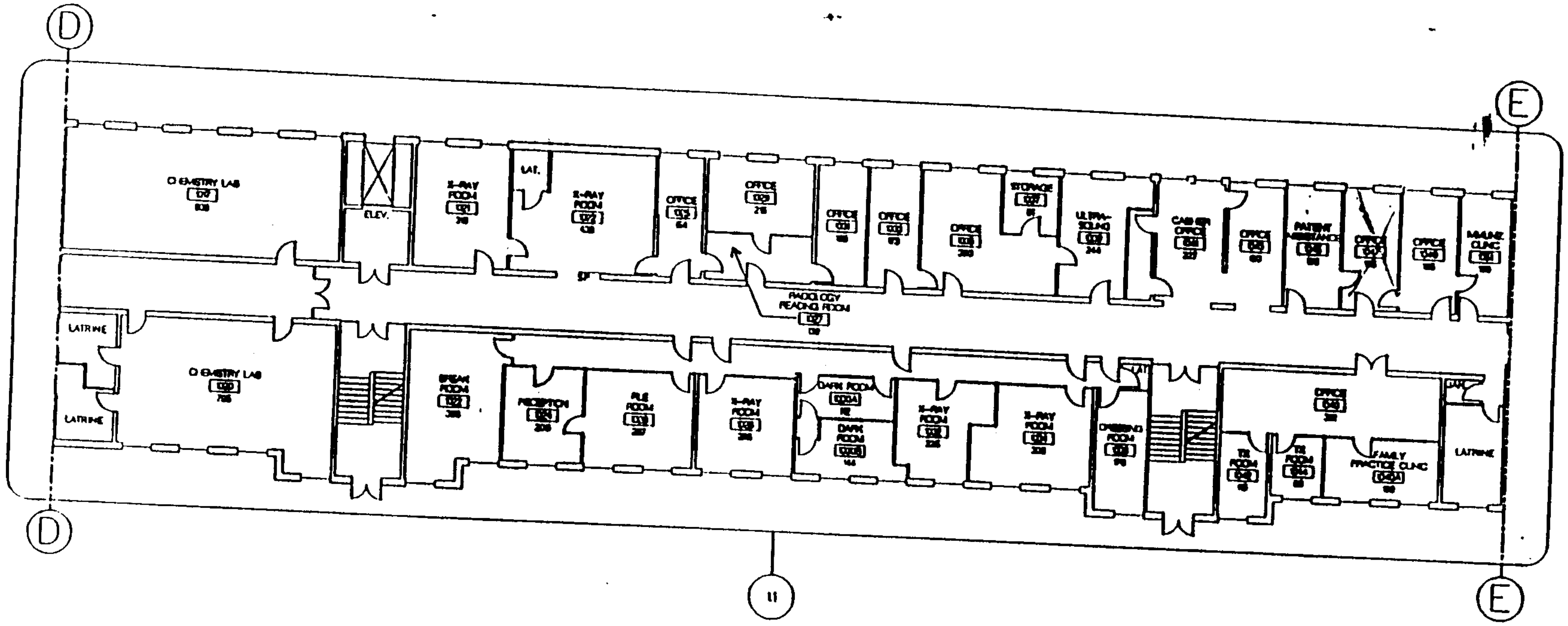
Facility Space Utilization Study

ARLOC: GE34G
Heidelberg Hospital
BUILDING 3613 (F)

Scale	Floor	Sheet
1" = 20'	FIRST	8 of 3
Date	**Version**	**Drawing No.**
February 1992	Prefinal	G34G3613I

3613G01DWG

Woolpert Consultants/Dursch Consult

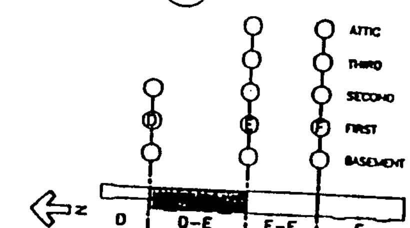


FLOOR ZONE TABLE

Gross: 38635	Net: 23183	N/G Ratio: 0.600052			
Zone UIC	US Unit	Catcode Description	Gross	Net	Cap UM
1.1		51010 HOSPITAL	29856	17915	
1.2		54010 DENTAL CLINIC	8779	5268	

ROOM USE — OFFICE
ROOM ID — 121
AREA (NSF) — 456
CAPACITY — 2 PN
SPECIAL DOOR — SP

20 10 0 20 FEET



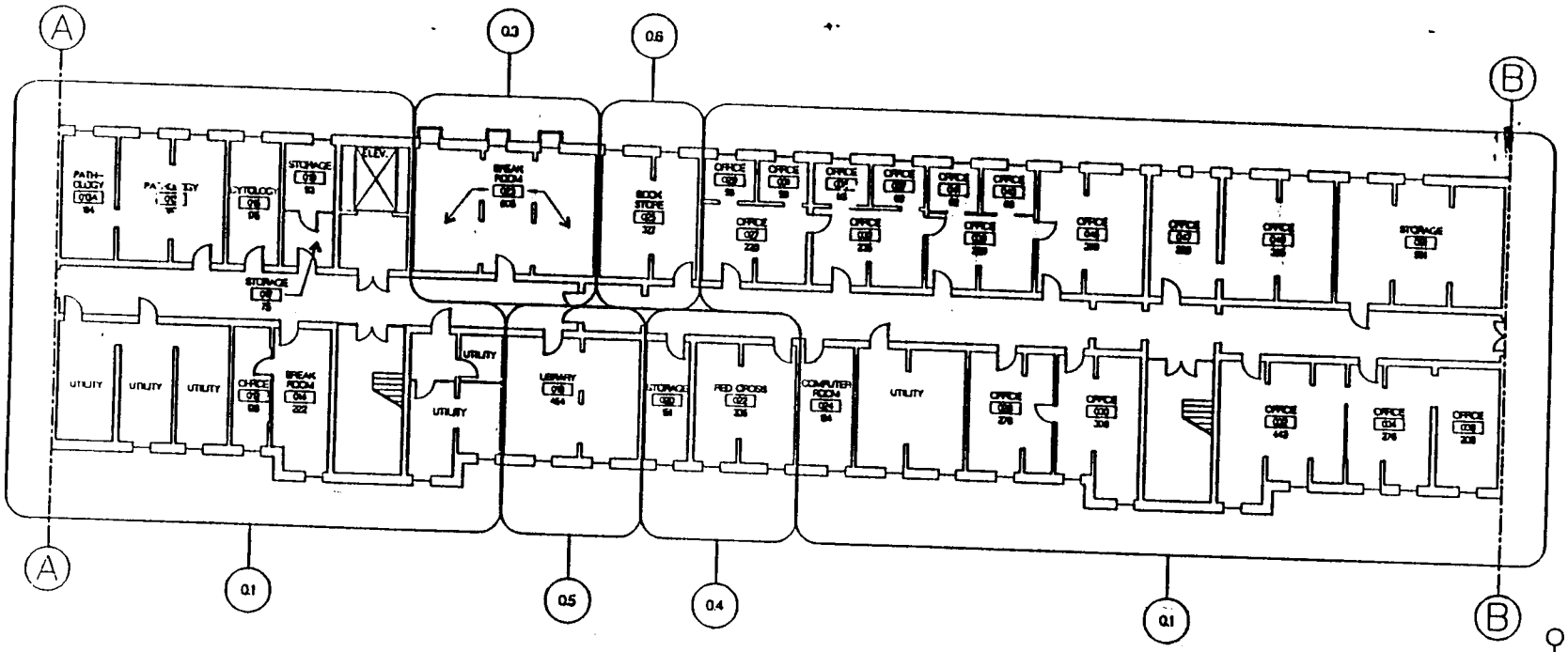
Facility Space Utilization Study

ARLOC: GE34G
Heidelberg Hospital
BUILDING 3613 (D-E)

Scale	Floor	Sheet
1" = 20'	FIRST	6 of 18
Date	Version	Drawing No.
February 1992	Prefinal	G34G36101

Woolpert Consultants/Dorsch Consult

3613A0LDWG



FLOOR ZONE TABLE

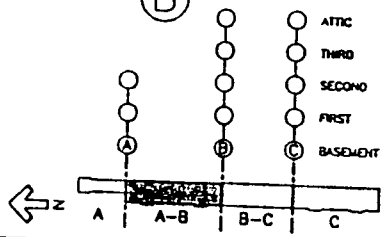
Gross: 38642	Net: 19337	N/G Ratio: 0.500414

Zone	UIC	US Unit
0.1		
0.2	WBKMAA	130TH MD HOSP 500 BED
0.3		
0.4	RED-CR	RED CROSS
0.5		
0.6		

Catcode	Description	Gross	Net	Cap UM
51010	HOSPITAL	27965	13994	
44225	MED SUPPLY WHS	6936	3471	
7405619	EXCH VENDOMAT	1209	605	
61050	ADMIN GEN PURP	971	486	
74040	LIBRARY BRANCH	907	454	
7405609	STARS & STRIPES	653	327	

ROOM USE — OFFICE
ROOM ID — 03
AREA (NSF) — 458
CAPACITY — 2 PN
SPECIAL DOOR — SP

20 10 0 20 FEET



Facility Space Utilization Study

ARLOC: GE34G
Heidelberg Hospital
BUILDING 3613 (A-B)

Scale	Floor	Sheet
1" = 20'	BASEMENT	2 of 18
Date	Version	Drawing No.
February 1992	Prefinal	G34G3600

3613A00.DWG

Woolpert Consultants/Dorsch Consult

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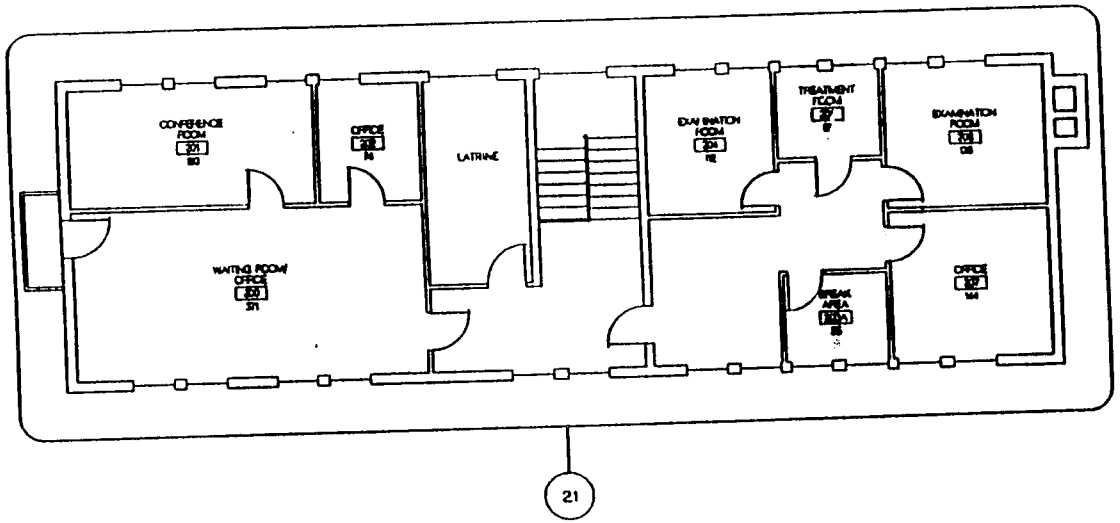

FLOOR ZONE TABLE

Gross: 1932	Net: 1127	N/G Ratio: 0.583333

Zone UC	US Unit	Catcode	Description	Gross	Net	Cap	UM
2.1		51010	HOSPITAL	1932	1127		

N

ROOM USE — OFFICE
ROOM ID — 123
AREA (NSF) — 456
CAPACITY — 2 PN
SPECIAL DOOR — SP

10 5 0 10 FEET

Facility Space Utilization Study

ARLOC: GE34G
Heidelberg Hospital
BUILDING 3625

Scale	Floor	Sheet
1" = 10'	SECOND	3 of 3
Date: February 1992	Version: Prelinal	Drawing No.: G34G36252

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3625_02.DWG

Woodpert Consultants/Dorsch Consult